Parental Engagement and Other Factors Associated with Adolescents Alcohol Use and Attitudes in Sri Lanka

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A thesis submitted in fulfilment of the requirements for

Doctor of Philosophy in Health Science

University of Canterbury

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2017

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Abstract

Adolescent alcohol use in Sri Lanka is a public health problem of growing concern. Policies introduced to try to reduce consumption have been relatively ineffective either through the impact of social forces or lack of resources. Another suggested approach is enhanced parental engagement. This research aimed to identify the patterns of and attitudes to alcohol consumption among Sri Lankan adolescents, determine how selected national and local environmental factors are related to consumption and establish relationships between parental engagement and adolescent alcohol use.

As this is a largely un-researched area in Sri Lanka the study used sequential exploratory mixed methods comprising four focus groups (29 participants) followed by a cross-sectional survey of a sample of 15-18 years old students (N=549) randomly selected from Government schools in four urban areas to examine parental engagement and other factors associated with adolescent alcohol use and attitudes. The survey drew on both findings of the focus groups (particularly related to peer influences, reasons for drinking and sources of illegal alcohol) and the international literature.

Approximately 5% of respondents reported drinking alcohol, 4% indicated that it was OK to drink alcohol under 21 years of age and 71% reported seeing others under 21 drinking. While 77% of respondents reported that young people drink alcohol to have fun, nearly as many (71%) reported that young people drink because they are sad and depressed. Of parental engagement types, parental monitoring was the most frequently reported, with parental controlling and communication identified at much lower levels.

This research provided substantial new information on adolescent attitudes to and experience of alcohol consumption, the social context of their drinking and their perspectives on parental engagement. This will be relevant for policy development and improving local and family interventions to reduce alcohol consumption. This research will be of interest to those wanting to see alcohol use within the broader context of adolescent health policy, particularly related to mental health.

Acknowledgements

As a researcher, I understood that the strategies adopted by the government, non-government organisations and other parties in the country, to reduce adolescent use alcohol are not particularly effective. In the meantime, I realised that family and parental factors are probably not given enough consideration as important influences on adolescents' behaviour. As the family is the basic social unit and parents are the foundation of child's life, it focused me on researching parental engagement and other factors associated with adolescents' alcohol use and attitudes in Sri Lanka. I wish to thank individuals and groups for their assistance and support for me to fulfil my research.

First, I would like to express my heartfelt gratitude to my supervisors, Dr. Arindam Basu and Associate Professor Pauline Barnett. My senior supervisor Dr. Arindam Basu, thank you for your guidance, comments and support during the development of this thesis and sharing your knowledge and skills throughout the period. To my co-supervisor Associate Professor Pauline Barnett, thank you too for your rigorous guidance, support and encouragement. Although you handed over your senior supervisor position with your retirement, I greatly appreciate your continued guidance, your time, extensive and quick feedback and reviewing my writing during this process. This research would have not been possible without my supervisors' guidance. In addition, I would like to thank librarians and the library service "Askme" at the University of Canterbury for a wonderful service.

I am also pleased to thank the General Secretary Healthy Lanka Alliance for Development Mr. Shakya Nanayakkara, for your support and providing resources to help me fulfil my goal. This research would have not been possible without your guidance. I would also like to express my appreciation to all the staff members of the Healthy Lanka Alliance for Development for supporting me in different ways. I would like to acknowledge Ministry of Education, Sri Lanka, for the permission to conduct this research and all the school principals and students who participated.

I would like to thank my family, my parents, my husband, my brother, two sisters and my son. My parents, thank you for your love and wisdom, you are always my greatest strength in my life.

Most of all, I thank my husband, who has always been supportive of my studies. Thank you for your continued encouragement, knowledge, support, patience and love. I greatly value your support in opening the world to me and your strength to keep things in perspective.

I would like to thank my brother, for your encouragement, love and strengthening me in this journey. Thank you, my two sisters, your love is my strength.

My son, I thank you for being my inspiration. Researching adolescents with a good adolescent is a unique experience. My son, the way you tolerated the difficulties of thesis writing strengthens me, and your love was my energy.

Finally, I am appreciative of friends who have provided me various forms of assistance during the preparation of this thesis.

Chapter 1 Introduction and Background

1.1 Background

This thesis addresses an important public health problem in Sri Lanka: adolescent alcohol consumption.

This has been of concern to both the Sri Lankan government and community for the last decade, but the usual macro-level regulatory policies to control access and supply have not been successful, resisted by both consumers and suppliers. The persistence of illegal production and sale of alcohol has been aided by poor enforcement and corrupt practices. Efforts to develop community education and action to reduce consumption among adolescents have been limited by lack of resources, so a more micro-level approach through the family, particularly parental engagement has been proposed.

This research aimed to identify the patterns of and attitudes to alcohol consumption among Sri Lankan adolescents, determine how selected national and local environmental factors are related to consumption and establish relationships between parental engagement and adolescent alcohol use.

As a preliminary, this chapter briefly reviews the international public health context of alcohol consumption and adolescent use of alcohol. It then outlines the situation in Sri Lanka in more detail, sets out the scope of parental engagement and proposes a public health framework for investigating adolescent alcohol use and parental engagement. As this is a largely un-researched area in Sri Lanka the methodology chosen is sequential exploratory mixed methods comprising four focus groups followed by a cross-sectional survey of a sample of 15-18 years old students.

1.2 Introduction

The World Health Organization (WHO) recognised that the harmful use of alcohol is the third leading risk factor for premature death and disability in the world. It accounts for approximately 3 million deaths and 5 percent of the global burden of disease and injuries as measured in disability-adjusted life years worldwide every year. Early initiation of alcohol use, before 14 years of age, is associated with increased risk of alcohol dependence and abuse at a later age (WHO, 2014).

Alcohol is associated with many serious physical, social and mental related issues, including deterioration of relationships with family, friends and co-workers. It has been widely used in many cultures for centuries and there are a variety of examples from around the world of environmental factors and historical trends in alcohol consumption and harm (WHO, 2014). Those environmental factors include economic development, culture, availability of alcohol, and the level and the effectiveness of alcohol policies. A wide range of global, regional and national policies and strategies have attempted to reduce harmful use of alcohol. A quarter (24.8%) of world alcohol consumption was unrecorded, homemade alcohol, illegally produced or sold outside normal government control (WHO, 2014).

It is recognised that there is a broad differentiation between western and non-western cultures in relation to alcohol. Culture includes knowledge, belief, art, morals, law, custom and other capabilities and habits that people acquire as members of society (Kase, Slocum, & Zhang, 2011). Therefore to understand alcohol behaviour, it is important to recognise the differing cultural perspectives of people in different societies.

Western countries are generally associated with higher levels of alcohol consumption and lower abstinence rates. However, alcohol-attributable mortality and burden of disease and injury are greater in many low and middle-income countries that are recognised as ‘non-western’ by WHO (WHO, 2014) due to patterns of drinking and the type of products consumed, particularly illegally produced alcohol (WHO, 2006). Countries like Sri Lanka experienced rising alcohol consumption as the country developed economically (Siriwardhana, Dawson, & Abeyasinge, 2012).

Alcohol related harm varies with the drinker's age, sex, familial factors as well as the drinker's behaviour, and the volume, patterns and quality of alcohol consumed. Poor quality alcohol may increase the negative impact on health and mortality since illegally produced alcohol may be contaminated with methanol or other toxic substances, such as disinfectants (WHO, 2014). The WHO also emphasised that harmful use of alcohol can have negative health, social and economic consequences for drinkers and other individuals such as family members, friends, co-workers and strangers. In 2001 it was estimated that one third of family income in Asia was spent on alcohol (Rutherford, McNeill, & Varley, 2001).

According to the World Health Organization accelerating economic globalization has increased alcohol consumption in developing countries (Jernigan et al., 2000). Therefore, it is important to study alcohol consumption and alcohol related adolescent behaviour specifically in developing countries. Studies have been conducted in developing countries on topics such as alcohol and poverty, levels of consumption, alcohol related domestic violence, sexual abuse, and crime as well as adolescents' lifestyle and behaviour (Dissabandara, Dias, Dodd, & Stadlin, 2009; Qidwai, Ishaque, Shah, & Rahim, 2010).

A global school-based student health survey was conducted using data from twelve developing countries. Botswana, Grenada, Indonesia, Kenya, Myanmar, the Philippines, Saint Lucia, Saint Vincent, and the Grenadines, the Seychelles, Thailand, Trinidad and Tobago and Uganda. The prevalence of alcohol use was varied widely across countries. It was ranged from a low of 1.6% in Myanmar to a high of 60.1% in the Seychelles. The current drinking rate of junior high schools boys was 20.5% and senior high school boys was 36.2 in 2004. The prevalence of junior and senior girls was 20% and 34.1 respectively (Osaki et al., 2009). A systematic review of the literature was conducted in Brazil to recognise the prevalence of adolescents alcohol use. According to the review, the prevalence of adolescents aged 10-19 alcohol use was 23% to 67.7% (Barbosa Filho, Campos, & Lopes, 2012).

A study conducted by Jaisoorya et al. (2016) in Kerala state, India noted that the prevalence of lifetime alcohol among adolescents aged between 12-19 boys 23.2% and girls 6.5% showing a prevalence increasing with age. A study from a developing country, Italy, reported that the widely used substance in Italy is alcohol among the adolescents and sample age range were 15 to

21 and the prevalence of participants alcohol drinking was 9% (wine) up to 28% (beer). The prevalence of adolescents alcohol use in developing countries varied from low to a higher level.

A cross-sectional survey conducted in a rural and ethnically diverse community with the sample of year 6th and year 12 students in Mississippi USA by McDermott et al. (2013) noted that the prevalence of drinking varies from 32.2% to 72%. Australian research used a sample from the age range 12 to 17 and recognised that the prevalence of adolescents' alcohol use has reported as 33.1% in age 16. Above noted studies also emphasised that the alcohol use becomes more common in increasing age in all the countries and these numbers are slightly different in different research in each country.

According to the data provided by WHO (2014), the prevalence of alcohol use in South African, Asia and middle east countries are lower than the developed countries. But, the report also emphasised that these countries have unrecorded alcohol consumption and South East Asian region has over 50% unrecorded alcohol (WHO, 2014). Registered data were largely unavailable in some countries in Asia, Latin America, North Africa, and Middle East countries.

In most of the countries in the world, the initial stage of alcohol use is as early as mid-adolescence (WHO, 2014). Adolescent alcohol use and associated problems are discussed in the next section.

1.3 Adolescents and alcohol worldwide

Alcohol use at a young age is a global problem that compromises adolescents, their families and society. It results in increasing traffic crashes, teenage pregnancies, sexually transmitted diseases, early exit from education and poor grades in schools, conflict in relationships and violence (WHO, 2014). Alcohol use is a significant contributor to injury and death in adolescence and is associated with increased physical symptoms and complaints. Underage alcohol use is associated with brain damage and neurocognitive deficits with implications for the learning ability and intellectual development of underage drinkers (Zeigler et al., 2005).

Adolescence is the period of life extending from ages 10 to 19 and today almost one in five persons in the world is an adolescent (WHO, 2013). This is a period of biological transition, which is characterised by changes in physical appearance and functioning, a psychological transition which reflects individual thinking, and social transition which is related to rights, privileges and responsibilities of an individual (Steinberg, 2001). During adolescence, a new balance must be found to accommodate young people's need for increased autonomy and changing cognitive and physical capabilities. For most children, the developing period of adolescence incorporates changes across multiple domains, including individual thinking and social transition (Coleman & Coleman, 2002).

Experimenting with alcohol can be a part of an adolescent's normal psychosocial development, but preventing young adolescent alcohol use is important since those who experiment with alcohol early may become regular users and eventually regular uses of other dangerous substances (Fraga, Sousa, Ramos, Dias, & Barros, 2011). As adolescence is a key period for developing patterns of substance use, it is the most appropriate period to prevent the use of alcohol. Adolescents are vulnerable to alcohol-related harm, and early initiation of alcohol is associated with increased risk for alcohol dependence and abuse at later life (DeWit, Adlaf, Offord, & Ogborne, 2000).

Accordingly, alcohol consumption among the young is a long-standing major public health problem worldwide. This is not confined to western countries but with the influence of the globalizing economies and changing cultural norms, more young people are experimenting with alcohol at a very early age in developing countries (WHO, 2006). There has been a significant lowering of the age at initiation of drinking in developing countries such as Thailand, Sri Lanka and India (WHO, 2006). The Sri Lankan cultural context and the alcohol experience is outlined in the next section.

1.4 Sri Lanka: the cultural context and alcohol experience

1.4.1 Sri Lanka today

Sri Lanka is an island nation of 66,000 square kilometres lying off the south-eastern tip of India. From the 16th century, Sri Lanka has been ruled by Portuguese, Dutch and British imperial powers. In February 1948 Sri Lanka became an independent country. It was exposed to western cultural influence because of the history of rule by western countries and was exposed to Indian cultural influence because of its proximity to India. These cultural influences have become significant in Sri Lanka by shaping attitudes, habits and behaviour patterns of people in Sri Lanka, especially in urban areas (Hettige & Paranagama, 2005).

Sri Lanka has a population of 20 million people and over half of this population live in small areas in Western, Central and Southern provinces which make up 23.2% of the total land area. One-fifth of the population comprises adolescents (WHO, 2006). The Sri Lankan population is divided into 4 major ethnic groups. The majority of Sri Lankans are Sinhalese (74%) with 18% Tamil and seven percent Muslim, and one percent consisting of Burgers and other minor ethnic groups (Hettige & Paranagama, 2005). However, in recent years Sri Lanka has experienced severe stress as a country through an ethnic conflict.

Sri Lanka has a free education system from first grade to university level, giving an opportunity for children from all parts of society to pursue a higher education. Further, Sri Lanka has a public health system that provides for every citizen in the country. The free education and health systems have contributed to improving the status of citizens in the country in households, in society and at the national level (Department of Census and Statistics Sri Lanka, 2010). Tea, textiles, petroleum products and minerals are some of the main exports, with textile fabrics, tea and spices, transport equipment and foodstuffs some of the main imports into the country (Central Bank of Sri Lanka, 2016).

Department of Census and Statistics Sri Lanka (2010) reported that as a result of government policies, Sri Lanka has achieved relatively higher standards of social and health development compared with countries with similar economies. Therefore, the Sri Lankan human development indicators such as life expectancy at birth, literacy rate, and decline in the growth rate of the

population are far ahead of other South Asian countries (Department of Census and Statistics Sri Lanka, 2010). This is attributed to actions of the government and community but also to the role of non-government organisations in Sri Lanka. Non-government organisations such as ADIC (Alcohol and Drugs Information Centre), FISD (Foundation for Innovative Social Development) and Healthy Lanka deliver health promotion through national and community level programmes to reduce alcohol consumption in the country. Sri Lanka had a civil war in the country for 30 years that ended in 2009. Since then the Sri Lankan government and non-government organisations have been contributing to develop the wellbeing of the community in war-affected areas and other parts of the country.

1.4.2 The alcohol experience in Sri Lanka

Currently, alcohol consumption is identified as a serious health issue and a social menace. It is seen as the major cause for the erosion of social values, with the country identified as having high levels of alcoholism, alcohol use and an early age of initiation (Department of Census and Statistics Sri Lanka, 2010). Recent research in Sri Lanka indicates that among the poor, 40% of income is spent on alcohol and tobacco combined (De Silva, Samarasinghe, & Hanwella, 2011), with consequences for young people and families.

Sri Lanka is a country that has a complex combination of personal and social factors associated with alcohol. The real prevalence of alcohol use is underestimated and law enforcement agencies are considered corrupt. Apart from parents, traditional norms, peers and media influence are also considered to have an influence on adolescents' behaviour (WHO, 2006).

The Portuguese, who colonised coastal areas of the country from the 16th century, had introduced wine. In 1815 British rule extended to the entire country with various types of alcoholic drinks introduced and excise duties bringing revenue to the country. Popularisation of alcoholic beverages increased government revenue. Sri Lanka had no significant experience of alcohol use until the British introduced alcohol licenses to taverns and increased promotion and distribution in the country (Hettige & Paranagama, 2005).

In Sri Lanka alcohol is associated with both culture and gender, with alcohol use a predominantly male activity. Research by Katulanda et al. (2014), reported that the prevalence of alcohol use ranged between 37.7%-52.5% in men and 1.6-5.0% in women. The highest prevalence of male drinking was among those with a medium level of education, with the highest level of alcohol consumption among females being among those with the highest level of education (Katulanda et al., 2014). Since alcohol use is not a cultural norm for women, currently, the alcohol industries are trying to increase female drinking by presenting positive images of alcohol in women's lives as Sri Lanka modernises (Samarasinghe, 2006).

Some parts of the community are more westernised and largely English-language educated. More women in this community drink compared with other groups. Culturally female drinking is not sanctioned in many situations unless the women come from a Christian background. As a result drinking among women is very low. Although alcohol use among women is becoming more common, problem drinking is not as evident as in western countries (Hettige & Paranagama, 2005). In the case of culture, the frequency and amount of drinking vary among different ethnic and religious communities. Urban areas, in particular, are influenced by western cultural attitudes, habits and behaviours. The prevalence of alcohol consumption varies from both ethnicity and religion affiliation (Hettige & Paranagama, 2005).

Drinking is not a socially approved custom among Sinhalese, Tamils and Muslims. Frequent drinkers could be found among Roman Catholic and other Christian population and this community is more westernised. Most of the time heavy drinkers can be found among Tamil estate workers. Cheap illicit brews are popular among them. It is also noted that drinking among Muslims is low compared to other ethnic groups. Drinking of Sinhalese/Buddhist is lower than Tamil/ Hindu people in the country. Drinking is high among Sinhala and Tamil Roman Catholic group (Hettige & Paranagama, 2005).

Toddy and Kassipu are very popular types of alcohol in rural areas. *Toddy* is an alcoholic drink made by fermenting the sap of the coconut palm. It has between four percent and six percent of alcohol by volume and a shelf life of about 24 hours (WHO, 2004). From early times *toddy* was popular in rural areas and made for domestic consumption. Currently, toddy is produced on a commercial scale and producers are required to have a valid license. In rural and poor urban areas the alcohol predominantly consumed is the illicitly produced *Kassippu* which is both

untaxed and unregulated. Consumption of *Kassippu* also has additional risks including inadvertent consumption of highly toxic methanol or products deliberately adulterated with various pesticides (Dias, 2010). Besides local illicit production, imported and smuggled liquor is available throughout the country through the support of corrupt law enforcement and local politicians. Bribery and corruption are associated with most of the parts of the alcohol industry (Hettige & Paranagama, 2005).

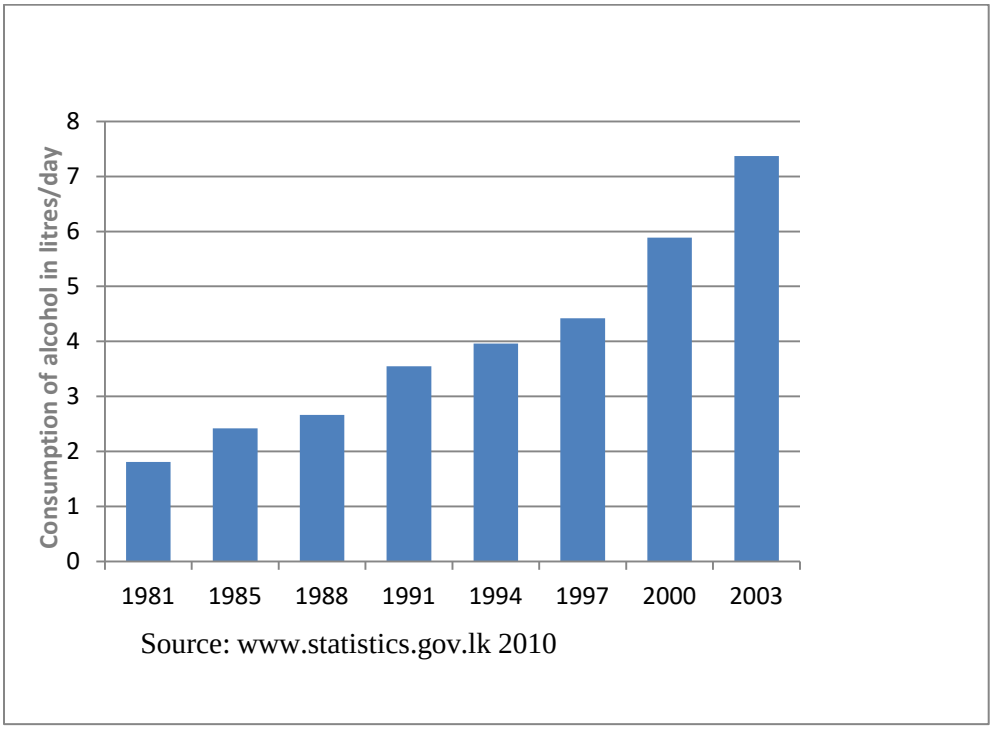

Figure 1.1 Per capita consumption of legally produced alcohol in Sri Lanka

Some researchers consider that Figure 1.1 significantly underestimates actual Sri Lankan alcohol production and consumption because of the unreported illegal alcohol production in the country (Hettige & Paranagama, 2005; Samarasinghe, 2006). Therefore understanding the current situation of alcohol is important; in particular, understanding adolescents' alcohol behaviour as the initiation of drinking commonly occurs at this time.

1.5 Sri Lanka: adolescents and alcohol

In Sri Lanka, beer products increased from 19.3 million litres to 29.5 million litres from 2003 to 2007. Perera and Torabi (2009) reported that beer is the most popular alcoholic beverage among young people in Sri Lanka and is likely implicated in the increase in young people's drinking. This research, among young males (16–30) reported that most of Sri Lankan young people claim to use alcohol for tension reduction. The same study noted that social factors such as urbanisation and westernisation and environmental factors such as availability and affordability may have contributed to this upward trend in the use of alcohol among adolescents (Perera & Torabi, 2009). The Sri Lankan National Report suggested that young people drink alcohol because of peer pressure and other factors such as conflict, high stress owing to uncertainties about the future, unemployment, and lack of education and opportunities (Sri Lankan National Human Development Report, 2014).

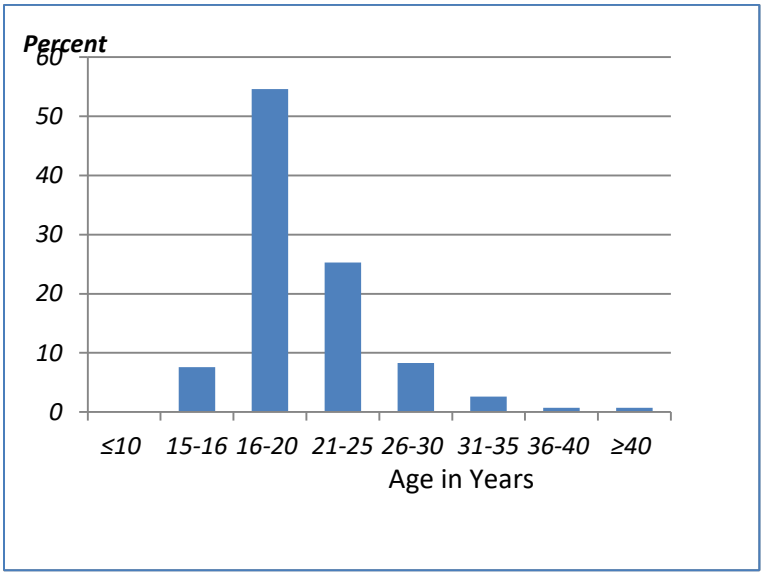

Figure 1.2 Age of initiation of alcohol- http://adicsrilanka.org/

According to Figure 1.2, most people initiated alcohol at a young age (age 16 to 20, 54.6%). This poses a serious threat not only to adolescent health but to health in later life when continued drinking is coupled with the availability of illegally produced alcohol (Perera & Torabi, 2009;

WHO, 2006). Although there is no recent research into the prevalence of adolescent alcohol use in Sri Lanka, a large, school-based UNICEF health survey (Thalagala, Rajapakse, & Yakandawala, 2004) reported that six percent of adolescent boys and one percent of adolescent girls were current users of alcohol. Moreover, research conducted by Somatunga, Ratnayake, Wijesinghe, Yapa, and Cooray (2014) demonstrated that according to their participants' responses, the prevalence of current drinkers were 14.5% among 15-24 young males and 1% among female. There are contradictory views on the prevalence of adolescents' alcohol use.

The current prevalence of alcohol use by age 15-24 male was 23.1%. However, when alcohol consumption compares with tobacco, there was a slight difference between alcohol and tobacco use. The prevalence of tobacco use by age 15-24 male was 25.1% (ADIC, 2015). Although Sri Lanka has banned cannabis and heroin, research showed that around 5% of people use these drugs illegally. The overall trend in heroin related arrests among adolescents shows an increase while there is a decline in cannabis related arrests. Compared with 2000, the total number of cannabis related arrests declined in 2002 (Thalagala et al., 2004). The total numbers of cannabis related arrests were 104 in 2000 and only 48 cannabis related arrests were reported in 2002. There were 68 adolescents among the heroin related arrests in 2003, an increased compared with 23 heroin related arrests in 2001 and 43 arrests in 2002 (Thalagala et al., 2004).

Negative consequences of alcohol in later life can originate in adolescence, including mental health problems, stress and substance use. Another factor particularly associated with youth alcohol use is road accidents, currently a leading cause death and injuries in Sri Lanka (Sri Lankan National Human Development Report, 2014). Therefore, it is important to consider youth well-being and health as they establish the foundation for the future (Sri Lankan National Human Development Report, 2014).

Sri Lanka has one of the highest suicide rates in the world, with local research indicating that alcohol use among males is one of the main reasons for this. Among males autopsied following suicide, 44% had been alcohol dependent.(Abeyasinghe & Gunnell, 2008). Sorensen et al (2014) reported on a proposal for an investigation of the role of alcohol in self-harm in rural areas in Sri Lanka. This analysis planned to examine the relationship between alcohol and self-harm at three levels: individual, community and policy levels.

Dissabandara et al. (2009) conducted a study to investigate drug use characteristics and risk-taking behaviour among a group of male incarcerated drug users in Sri Lanka aged 19-61years. Most had initiated substance use during late adolescence and had adverse childhood experiences such as unsatisfactory relationship with parents, both of which are risk factors for adult abuse of alcohol or other drugs.

As noted above, in recent years, Sri Lankan alcohol consumption patterns have changed. WHO (2006) recognised the emergence of wine and beer drinking, an increase in drinking among women, early experimentation and derceasing age of initiation, a shift in consumption from urban to rural areas and transitional towns, more "binge" drinking, greater acceptability of drinking as a social norm and alcohol use along with high-risk sexual behaviour. Most of these changes have also been noted in relation to adolescents' alcohol use (WHO, 2006).

1.6 Efforts to prevent adolescent alcohol consumption in Sri Lanka

Efforts are already being made in different ways to discourage adolescent alcohol use. Sorensen et al (2014), in investigating alcohol and self-harm in Sri Lanka suggested that investigation and intervention could be categorised at national, community and family levels. The WHO (2014) reports provide various global policy strategies to reduce alcohol use in the world. Sri Lankan government also have been applied different types of world recognised strategies to reduce adolescents' alcohol consumption in the country.

At the **national level,** the government has developed, introduced, and implemented a range of national laws and policies to protect the youth and children. In 1984 the Sri Lankan parliament enacted the National Dangerous Drug Control Board (NDDCB) Act giving the board the power to formulate and review national policies regarding alcohol prevention. NDDCB has been conducting programmes to reduce alcohol and other drugs related problems in Sri Lanka. To further reduce alcohol use of Sri Lanka the National Authority on Tobacco and Alcohol (NATA) Act of 2006 was passed by Parliament, with the Authority (NATA) implemented by the Ministry of Health.

The purpose of NATA was to develop policies to protect public health from alcohol related harm through the assessment and monitoring of production, marketing and consumption. One of the main objectives of NATA was to discourage youth from consuming alcohol by increasing the age of purchasing alcoholic beverages from 18 to 21 years. NATA set up restrictions on hours of sale and days of sale, implemented a tax on alcohol and further reduced the national maximum legal alcohol blood concentration (BAC) when driving a vehicle from 0.08 to 0.06 percentage by volume (% by vol) to reduce road accidents. NATA also banned alcohol advertising and sponsorship for cultural educational and sports events and ended all free distribution of alcohol at any events.

It is important to note that whenever the Sri Lankan government increases the tax on legal alcohol products to raise the price of alcohol and reduce the alcohol demand, corrupt politicians and illegal producers gain advantages from any price increase in legal alcohol production. Illicit alcohol sales are impossible to control as enforcement agencies are corrupt and open to political interference. Therefore tax increases do not produce advantages as a preventive method since it increases the consumption of illegally produced alcohol (Hettige & Paranagama, 2005).

International evidence regarding the availability of alcohol has provided positive effects on reducing consumption of alcohol. A systematic review focusing of availability of alcohol: hours and days of sale and density of alcohol outlets recognised that the restricting availability of alcohol is an effective measure to prevent alcohol harm (Popova, Giesbrecht, Bekmuradov, & Patra, 2009). Mostly from North America, Australia, Brazil and Britain has restricted opening hours especially night opening hours and they recognised that it reduces not only the alcohol consumption but also the alcohol related problems (Room, 2014).

According to government policy, people cannot open liquor stores within the 500 meters of religious place or school in Sri Lanka. However, as a solution, if the Sri Lankan government can increase the distance and reduce the density of liquor store in the area, it would be an effective approach to reduce the consumption. According to previous research, the density of outlets and type of outlets are important factors of adolescent drinking. When youth have greater exposure to alcohol through marketing, it encourages early initiation and binge and hazardous drinking among youth (Jernigan, Noel, Landon, Thornton, & Lobstein, 2017).

As a global strategy, many countries apply restriction on alcohol advertising. Under NATA act, Sri Lanka government also banned the alcohol advertising and implement in the country.

Internationally endorsed policies such as the NATA Act (Samarasinghe, 2006) for reducing adolescents' alcohol problems by restricting availability and controlling its promotion are ineffective in a country such as Sri Lanka where law enforcement and other agencies are corrupt (Hettige & Paranagama, 2005). As government regulation to control adolescent consumption of alcohol appears ineffective, alternative prevention strategies need to be found to help address the problem of adolescent consumption.

At community level, a range of non-government organisations (NGO) and community workers are contributing many prevention programmes such as poster campaigns, public lectures, community and school-based prevention programmes. Sri Lanka has introduced school-based interventions such as awareness programmes, poster campaigns and community-based initiatives using government and non-government agencies to educate adolescents to exert self-control skills for avoiding the use alcohol (Siriwardhana et al., 2012). Siriwardhana et al. (2012) conducted a study to examine the acceptance and effectiveness of a multi-component community-based alcohol education programme in a rural Sri Lankan village. This education programme was delivered over three months, mainly targeting harmful drinkers, and the research reported some positive effects in reducing alcohol use. The researchers emphasised that successful community intervention is dependent on social cohesion and leadership (Siriwardhana et al., 2012).

These community and school-based programmes produced some positive outcomes, but they are not widely disseminated across the whole country and there are insufficient resources to achieve this.

A **third level, the family level,** through parental engagement with children holds promise for preventing adolescent alcohol use (Rishani, Chandraratne, & Fernando, 2015). Although, some research noted that parents and family are important determinants of adolescents' general and alcohol related behaviour, programmes targeting parents of adolescents are limited in Sri Lanka. There are a number of awareness programmes undertaken in Sri Lanka by non-government organisations such as ADIC, Healthy Lanka, and FISD targeting adult males, young people, and

children in the country, but there have been limited programmes in relation to parents, family and adolescent alcohol behaviour.

Despite the lack of programmes and resourcing, there is interest in this area of work in Sri Lanka. A study conducted by Pathirana (2016) in Sri Lanka explored adolescents' relationship with their parents, siblings and peers. The study reported a variation in parent-adolescent relationships and that different parental styles produced varied effects on adolescent development. If parents were supportive and attentive, adolescents had a positive relationship with them. On the other hand, if parents were perceived as distant, uncaring or abusive, then parent-adolescent relationships were negative (Pathirana, 2016).

Many cultures have their own customs, values and practices related to alcohol use. Studies from western countries tend to emphasise the individuality and independence in adolescent's behaviour. This individualism may become more common in non-western countries as, through globalisation, many western cultural components replace the traditional practices in non-western countries (Perera & Torabi, 2012). Despite these trends, Sri Lankan culture still values collectivism and may experience different parent-child relationships. The understanding of parental engagement with their adolescents in relation to alcohol is missing in Sri Lanka and is an important area for investigation in this thesis.

1.7 Parental engagement: an overview

The family is an important structure and the foundation of child development, with parents playing a major role (Wiium & Wold, 2009). Reviews of youth alcohol use emphasised that the high quality parenting can contribute to reduce youth alcohol (Huang, Lee, Hong, & Grogan-Kaylor, 2011) consumption and that positive parental practices are protective factors for adolescents. Parents are powerful as socialisers because they are in a position to manage their children's environments to ensure that they are exposed to positive social influences.

Some research has noted that the family is the primary source of transmission of cultural factors that may underpin individual differences in adolescents' behaviour (Loke & Mak, 2013; Mares, van der Vorst, Engels, & Lichtwarck-Aschoff, 2011). In Asian cultures, including Sri Lanka,

parent-child relationships remain central throughout the whole life course, therefore research findings on adolescent behaviour in western and non-western cultures may differ (Peterson et al., 2015).

According to Yatchmenoff (2005) engagement is defined as forming a relationship, establishing a goal, developing trust, or any other aspect of the helping process.

Various studies have identified the impact of parental engagement on adolescent alcohol behaviour. A longitudinal study by Nash, McQueen, and Bray (2005), a cross-sectional study by Tuttle (1995), and qualitative studies by Bourdeau, Miller, Vanya, Duke, and Ames (2012) recognised the relationship between parental engagement and adolescent alcohol use. These studies suggested that family support is an important context for the prevention of alcohol and substance abuse during adolescence.

A review of the literature by Steinberg and Morris (2001) on parent-adolescent relationships demonstrated that parental engagement with their adolescents could lead towards increasing competence and psychological well-being. Parental engagement makes the child more receptive to parental influence, enabling more effective and efficient socialisation. Those adolescents are less likely to engage in alcohol use (Steinberg, 2001).

Parents engage using different parental strategies, styles, and approaches to support the development and health of adolescents. Research has identified a comprehensive set of parenting strategies, styles and approaches on alcohol initiation and alcohol use, with the key components of parental engagement being monitoring, controlling, and communication (Fletcher, Steinberg, & Williams-Wheeler, 2004; Kao & Carter, 2013; Nash et al., 2005).

Overall, research indicates a diversity of ways in which parents engage with their children, with the main approaches parental control, parental communication and parental monitoring. These are commonly used parental approaches that have shown success in modifying adolescent behaviour, including in relation to alcohol use (Harris-McKoy & Cui, 2012; Parvizy, Nikbahkt, Pournaghash Tehrani, & Shahrokhi, 2005; Pasch, Stigler, Perry, & Komro, 2010; Ryan et al., 2011; Steinberg, 2001; Turrisi, Wiersma, & Hughes, 2000; van der Vorst, Engels, Dekovic, Meeus, & Vermulst, 2007).

Parental control

It is important for parents to be consistent when children are younger but in adolescence parental consistency is less important than having at least one parent who is authoritative (Steinberg, 2001). Adolescents are not fully mature, therefore providing parental guidance is still very important. Parents may need to renegotiate their parenting roles and modify their parenting behaviour to accommodate adolescent development at this time (Steinberg & Silk, 2002). During adolescence, the role of parental control becomes less clear and sometimes too much parental control can prevent adolescents developing in healthy ways. Another view is that parental control remains crucial for adolescents (Bourdeau et al., 2012; Harris-McKoy & Cui, 2012). In the meantime, Chong, Rahim, Teh, and Tong (2014) reported that stricter parental controlling may generate negative emotions in adolescents.

Many studies have demonstrated the association between parental control and adolescent alcohol use. Parents can exert consistent and strong influence on their children's alcohol use throughout the adolescence, in particular by setting alcohol-specific rules (Harris-McKoy & Cui, 2012; Koning, van den Eijnden, Verdurmen, Engels, & Vollebergh, 2012; McKay, 2015; van der Vorst et al., 2007).

Parental communication

Particularly, when children reach adolescence and begin to establish a clear sense of their own identity and an ability to make decisions for themselves, parents' verbal communication is the direct way of expressing parents' ideas and thoughts to their adolescents (Jackson, Bijstra, Oostra, & Bosma, 1998). A number of important studies have examined the relationship between adolescent-parent communication and adolescents' alcohol us (Mares et al., 2011; Martyn et al., 2009; van der Vorst, Burk, & Engels, 2010).

Parental monitoring

Parental monitoring is represented by parents' knowledge of their children's behaviour and activities when they are not under direct supervision. When parents are effective monitors, adolescents are less like to engage in problem behaviour including alcohol use. Ineffective parental monitoring may be due to lack of skills on the part of parents. Behavioural skills are essential for parental monitoring and need to vary with the age of adolescents. As a child matures,

new monitoring skills are required to recognise adolescent behaviour (Dishion & McMahon, 1998). Monitoring is widespread, and it reflects parental efforts to control and manage their children. Strong parental monitoring can both deter adolescents from engaging with alcohol in the first place and reduce the risk of future use (Stattin & Kerr, 2000).

1.8 Framework for investigating adolescent alcohol consumption in Sri Lanka

According to the above information, Sri Lanka has introduced strong laws to reduce adolescents' alcohol consumption in the country. In addition, non-government organizations and community support workers have contributed their efforts to reducing adolescents' alcohol consumption. Specifically, when the NATA act was passed, the Sri Lankan government included provisions aimed at reducing access of alcohol to minors in the country. Despite these efforts, the current prevalence of political influence in the alcohol industry, corrupt law enforcement agencies and lack of resources may cause alcohol related negative social, health and economic impacts in the country to continue. Unfortunately, efforts so far have not produced positive results in reduced adolescent alcohol consumption.

This reflects the general 'determinants of health' understanding that has dominated public health for the last two decades and has encouraged researchers and policy makers to consider the widest range of influences on health problems. Recent work by WHO has focused on macro-level determinants of health particularly in relation to inequalities. According to the WHO (2005) report Closing the Gap in a Generation, Sri Lanka has been influenced by social determinates such as globalisation and trade with adverse social, economic and demographic changes. Those changes have affected working conditions, learning environments and family patterns as well as the cultural and social structure of communities.

The same report introduced various levels of social determinants relevant to closing gaps in health inequalities in Sri Lanka and other South-East Asian countries. Empowering communities and the less privileged, controlling the private sector, enhancing family structure and parenting, and promoting changes in cultural values and working patterns among parents are some of the

social determinants that can contribute to improving health status and narrowing health inequalities (WHO, 2005).

But equally relevant for considering adolescent alcohol use is the early determinants of health model illustrated by Whitehead, Dahlgren, and Gilson (2001) developed by Dahlgren and Whitehead (1991) which addresses the range of contributing factors at different levels. The Dahlgren and Whitehead model illustrates the features at different levels required to address health inequalities, such as individual actions (micro-level), community networks (meso-level) and general socio-economic, cultural and environmental factors (macro-level). A number of factors can operate at more than one level. This approach has been adopted by Sorensen et al. (2014) who, in their protocol for research into self-harm and alcohol in Sri Lanka identified three key levels for research and analysis: national, community and family. Figure 1.3 illustrates some of the different determinants of adolescents alcohol use at different levels of society, based on the general understanding of determinants, Dahlgren and Whitehead's model and the local insights of Sorensen et al. (2014).

Table 1.1 Determinants of adolescent alcohol use

Level 1 **National and Societal**	**Level 2** **Local Community**	**Level 3** **Family relationships**
Cultural norms and values	Local cultural norms	Parental engagement
Law and law enforcement	Expectations of adolescent behaviour	Parental alcohol behaviour
Public policy: Health	Local access to alcohol	Sibling relationships
Education	Schools	
Welfare	Peer groups	
Economy	Neighbours	
Media and advertising		

This comprehensive approach underpins the Sri Lankan government's National Strategic Plan: Adolescent Health 2013-2017 (Ministry of Health, 2013). The planning process, while led by the Ministry of Health, was developed in partnership with a range of other ministries and agencies. The Plan includes a goal to reduce substance abuse, including alcohol, and proposes health strategies that are empowering, inclusive and community/family oriented. It specifically recognises the role of parents.

An area of determinants that has received very little attention in Sri Lanka, however, is that of parental engagement in relation to adolescents and alcohol. As children enter adolescence they spend increasing amounts of time away from their parents (Mounts & Steinberg, 1995), but family is still a great source of support for adolescent health and development (Qidwai et al., 2010). The research related to parental engagement with adolescents and its relevance to alcohol behaviour discussed more fully in Chapter 2.

1.9 Purpose, objectives and research approach

Although a number of different strategies have been used to try to reduce adolescent alcohol use in Sri Lanka, the relative ineffectiveness of these, either through the impact of social forces or the lack of resources shows the importance of seeking new approaches. For this reason, this thesis focuses on adolescents and alcohol within a family context while maintaining the broad public health approach outlined in Figure 1.3.

Research into parental engagement in adolescent's alcohol use has been undertaken in western countries, but there are few studies focused on adolescent alcohol use and parental engagement in Asian countries.

Therefore, the present study aims to understand adolescent alcohol use in Sri Lanka and the role of parental engagement. To achieve these aims this research will address the following objectives:

- To identify the patterns of and attitudes to alcohol consumption among Sri Lankan adolescents,

- To determine how selected national and local environmental factors are related to adolescent alcohol consumption
- To establish the relationship between parental engagement and adolescent attitudes to alcohol use.

As this is a largely un-researched topic in Sri Lanka, a mixed-methods research approach has been chosen to provide qualitative information on the views of adolescents as a preliminary to developing a cross-sectional survey questionnaire for administration to a sample of students aged 15-18 in urban high schools in Sri Lanka.

It is anticipated that the information generated from this research will provide insights for public policy and for planning local and family-based programmes that will aim to reduce the early initiation of and harm from alcohol among Sri Lankan adolescents.

1.10 Outline of the thesis

This thesis consists of 6 chapters. Chapter 1 has included background information regarding the problem of adolescents' alcohol use in the world and set out the problem of adolescents' alcohol consumption and other relevant information regarding the need for this research in Sri Lanka.

Chapter 2 comprises a review of the international literature in relation to adolescent alcohol use, the factors influencing it, and the role of parental engagement in modifying adolescent alcohol behaviour.

Chapter 3 provides the details of the research methodology and explains the mixed-method approach using focus group interviews and a cross-sectional survey of high school students.

Chapter 4 sets out the results of the focus group interviews and Chapter 5 provides results of cross-sectional survey of adolescents.

Chapter 6 presents a discussion of the major findings, the limitations and strengths of the study, and its implications. It includes an assessment of the contribution of the research and recommendations for action.

Chapter 2 Literature Review

2.1 Introduction

As stated in Chapter 1, the overall aims of this study are to contribute to the understanding of Sri Lankan adolescents' alcohol use within their local and wider environment and the role of parental engagement on adolescent attitudes towards alcohol. To achieve these, it is important to begin by examining the available literature relevant to both of these aims.

The first part of the literature review (section 2.2) provides a brief overview of adolescence and adolescent risk behaviour and discusses the adolescent use of alcohol internationally. Sections 2.3 and 2.4 reflect the broad public health conceptual framework set out in Chapter 1 (Fig 1.3), drawing also on the 'ecological circle' of Bronfenbrenner (1994). Section 2.3 reviews the environmental factors associated with adolescent drinking and Section 2.4 reviews the importance of parental engagement in modifying adolescent behaviour. Section 2.5 examines aspects of parental engagement in more detail, describing the key components of communication, monitoring and controlling. The chapter concludes with a critical analysis: research overview and gaps.

This chapter identifies the appropriate scholarly literature from electronic databases in public health and social sciences. The search strategy used electronic database such as MEDLINE, Pub Med and Web of Science. University of Canterbury library resources and an internet search via the Google advanced search tool were also used. The search strategy included the following search terms: adolescence, parent-child relationship, parental engagement, adolescent alcohol initiation and use, underage drinking, parental monitoring, communication, controlling and peer influence on adolescents. The words youth, teens and young people were also used to search relevant scholars in relation to adolescents. The search was carried out to locate papers on the concepts of risk behaviour, alcohol use and adolescents, and parental relationships. A manual search in the reference list of some articles was also used to source relevant papers. Special efforts were made to locate research from developing countries, particularly in South Asia. However, such papers were few and so most research and review papers used in this study were published in developed counties.

2.2 Adolescent behaviour in relation to alcohol

2.2.1 Adolescence and adolescent behaviour

Adolescence is an exciting and dynamic period as adolescent experience changes in their bodies and cognitive development. They are constantly negotiating with their families, friends, schools and society. Importantly, their physical, emotional and social needs change as they grow, but as they navigate the critical task of self-identity development and graduated autonomy, adolescents are at risk of the development of harmful behaviour (DeVore & Ginsburg, 2005). There is a large quantity of international literature on this topic, so this section provides just a few examples of both qualitative and quantitative studies from both western and non-western countries to illustrate the scope of this literature and some of the important issues that arise.

A qualitative study from the UK by Rodham, Brewer, Mistral, and Stallard (2006) identified adolescents' perception of risk and explored the factors that they felt influenced their decisions to engage in or avoid risky behaviour. The researchers employed focus group discussions that allowed participants to determine the direction of discussion and let perceptions emerge naturally in the course of conversation within the groups. Using convenience sampling to recruit participants and all participants were aged over 16 years were recognised as limitations of the study.

The researchers indicated that investigating adolescent risk perception from an adult perspective may not be appropriate since assumptions are based on adult beliefs and adult-centred approaches to research and may limit the understanding of adolescent behaviour.

This study also noted that as adolescence is a period when lifelong habits may be developed, establishing positive health behaviours during adolescence holds great potential for reducing later health problems. This study found that participating adolescents seemed to have high levels of knowledge and gave careful consideration to decisions regarding health and risky behaviour. However, in some situations, even though adolescents understood the risk, they engaged in risky behaviour because, for example, of their wish to fit into a group.

An example of a qualitative study from a non-western country was from Teheran, Iran where Parvizy et al. (2005) undertook in-depth interviews with 41 adolescents. The researchers

employed content analysis to generate themes relating to adolescents' perspectives on addiction. The researchers emphasised the importance of viewing health issues from adolescents' own perspectives and indicated that few studies in Iran had done this. They suggested that knowledge of adolescent-centred views might allow better communication with youth to draw on their strengths, build on their idealism and guide them towards safer behaviour. They also emphasised the importance of conducting both quantitative and qualitative research on complex phenomena such as adolescent addiction, its trends and outcomes.

From the large number of quantitative studies of adolescent behaviour in western countries (Beyers & Goossens, 1999; de la Haye, Green Jr, Pollard, Kennedy, & Tucker, 2015; Newton, Barrett, Swaffield, & Teesson, 2014), a few illustrative studies are presented here.

A UK study by Reniers, Murphy, Lin, Bartolomé, and Wood (2016) investigated the influence of personality characteristics and gender on adolescents' perception of risk and risk-taking behaviour. The sample of 157 female and 116 males were aged between 13 and 20. Participants completed a questionnaire on risk perception, risk-taking and personality. The personality characteristics used in this were reward, impulsiveness and social anxiety. Other measures used were age, risk perception, risk-taking behaviour and behavioural inhibition.

Findings showed that male and female participants did not differ in age or self-reported levels of sensitivity for reward and impulsiveness. However, males perceived behaviour as less risky and took more risks. They were less sensitive to negative outcomes and less socially anxious than female participants. Increased age was associated with an increase in risk-taking behaviour. The study also reported that although adolescents may understand the riskiness of their behaviour, anxiety may increase their readiness to accept the risk.

A cross-sectional survey from Northern Ireland (part of a longitudinal study of drug use behaviours of young people aged 11-16 attending emotional and behavioural difficulty units) found that reported drug use increased with age. Different measures were used to obtain data on a range of risk and protective factors including drug use, delinquency and anti-social behaviour, communication with parents, commitment and motivation to do well at school, neighbourhood factors and their leisure activities (Higgins, McCrystal, & Percy, 2007).

As this particular survey was a one year cross-sectional survey within a longitudinal research design, Higgins et al. (2007) indicated that research overall offered the opportunity to examine adolescent behaviour over time as cross-sectional surveys were comparable between years as well as for the overall duration of the study. The findings indicated the importance of the development and timing of targeted prevention initiatives during adolescence. The timing of interventions is crucial with earlier intervention during adolescence more likely to be effective in problem behaviours such as drug abuse and antisocial behaviour (Higgins et al., 2007).

Another quantitative study, from Belgium, examined the consequences of adolescents' emotional and behavioural autonomy for different aspects of psychosocial adjustment in the context of the parenting process as perceived by the adolescent (Beyers & Goossens, 1999). This research comprised a sample of 558 students aged 12 to 17 years and used a questionnaire including measures of emotional autonomy, behavioural autonomy, authoritativeness, self-reliance, internal distress, school grades, deviant behaviour and social desirability (Beyers & Goossens, 1999).

Beyers and Goossens (1999) reported that emotional and behavioural autonomy are highly correlated. These two aspects of autonomy show the same patterns of correlation with the psychosocial adjustment variables such as authoritativeness, self-reliance, internal distress, school grades, deviant behaviour, and social desirability. High levels of autonomy are associated with greater self-reliance, more internal distress, lower school grades and more deviant behaviour, and increases with age. A notable finding indicated that adolescents who detach themselves from parents are at risk of unhealthy psychosocial development.

A quantitative study from a developing country Pakistan was conducted by Qidwai et al. (2010) to understand adolescent life style and behaviour. Students aged 12-19 years were surveyed in various schools in Karachi. Research highlighted the importance of family to adolescents and demonstrated that family had an important role in helping adolescents' live healthier lives. Researchers emphasised the need for further studies of adolescents since they form such a significant part of the world's population (Qidwai et al., 2010).

A longitudinal study in an urban, non-western but developed population, Taipei City, Taiwan, examined behavioural and developmental changes from primary school to junior high school

students. Lee-Lan, Likwang, Szu-Hsien, Chuhsing, and Ling-Yen (2002) investigated the evolution of child and adolescent behaviour, measuring the behavioural change in students, the influence of parents on these changes and eliciting individual, family and school influences on student health behaviour. According to the study smoking, consumption of unhealthy foods, lack of exercise, alcohol abuse, drug abuse and accidental injury lead to both increased morbidity and mortality during young age.

The study noted the importance of understanding the early development of a person's life because the longer the period of exposure to negative behaviours, the greater the damage incurred. Therefore, habits and behaviours adopted at a young age may have important consequences for health. In addition, as circumstances change the changing environment may also have an impact on the health of adolescents (Lee-Lan et al., 2002).

There have been few studies of adolescents in Sri Lanka. One qualitative study explored perceived reproductive health issues, health-seeking behaviour, knowledge about available services and barriers to reach services (Agampodi, Agampodi, & Ukd, 2008). A sample of 32 adolescents between 17-19 years of age participated in four focus group discussions, with data analysed thematically.

This study is an early example of one of the few studies of the health behaviour of adolescents in Sri Lanka. An important problem for adolescents was the psychological distress due to conflict with parents. Agampodi et al. (2008) noted that in this study, as elsewhere in both developed and developing countries, most adolescents sought help from friends and non-parent family. The researchers indicated that negative attitudes towards involving parents and teachers might be a sign of a rapidly deteriorating family environment, especially for boys. The researchers recommended that this is addressed immediately since parent-child connectedness is one of the major factors in adolescent health and risk-taking behaviour.

Another study in a rural village in the Anuradhapura district in Sri Lanka by Rishani et al. (2015) investigated parental involvement and sexual and reproductive health problems in adolescents. A total of 72 adolescent and parent pairs were selected, with adolescents, both boys and girls, aged 10-16. On the basis that adolescents are guided largely by their mothers, only mothers were selected as parental subjects. The questionnaire included five dimensions of parental

involvement: parental communication, monitoring of reproductive health matters, awareness of physical and psychological changes, parent-child relationship quality, addressing media influence and peer factors. The questionnaire was validated according to the local context. Parental involvement was scored from low to moderate, high and very high (Rishani et al., 2015).

Results showed that 35% of adolescents had moderate parental involvement and 65% of parents had a high level of involvement. No parents had low or very high level parental involvement. The researchers assessed the levels of parental involvement overall as unsatisfactory, with parental communication, level of addressing media influence and peers particularly unsatisfactory given their importance to adolescent health.

An important study in Sri Lanka on adolescents' relationships with their parents, siblings and peers, conducted by Pathirana (2016), indicated that parents, peers and siblings had an impact on the psychosocial well-being of the adolescents studied. The researchers also explored specific issues pertaining to each relationship, for instance, whether there are some types of parenting better for the adolescent than others. They conducted semi-structured interviews, analysed thematically, with 10 adolescents aged 15-18 years.

Results indicated that variation in parent-adolescent relationships affected the development of adolescents. If parents are supportive and attentive, then adolescent participants seemed to find great comfort in their relationship with parents. On the other hand, if parents were perceived to be distant, uncaring or abusive the parent-child relationship was perceived as negative (Pathirana, 2016). Findings also indicated that friends and peer relationships were important factors associated with adolescents' psychosocial well-being. Therefore, the absence of loving caring relationships with parents seemed to generate more intimate relationships with peers and partners (Pathirana, 2016).

The research findings reported in this section demonstrated that adolescence is a crucial stage of life when health behaviours are developed, with maybe long-term consequences. Some authors noted the importance of undertaking research from the perspective of adolescents themselves as a way of ensuring that information would be relevant to helping change behaviour. Of particular interest is the emerging literature on adolescents and parenting in Sri Lanka.

2.2.2 Overview: Alcohol and adolescents

This section is an overview of some of the impacts of alcohol consumption on adolescents and the diversity of their drinking patterns. Again, there is a large literature on these topics so details are provided on only a small selection of studies.

Adolescent drinking and consequences in later life

There is evidence that the earlier the age at which young people take their first drink, the greater the risk of abusive consumption, the development of alcohol dependence and serious health problems, including brain disorders (DeWit et al., 2000; Fraga et al., 2011; Grant & Dawson, 1997; McCambridge, McAlaney, & Rowe, 2011; Pillai et al., 2014; Tapert, Caldwell, & Burke, 2004; Zeigler et al., 2005).

A systematic review investigated alcohol consumption among adolescents aged 15-19 and any subsequent outcomes at age 20 and in later life. One finding was that higher alcohol use in late adolescence continued into adulthood. Further, this review noted that late adolescence drinking was associated with alcohol problems, including dependence. This review also demonstrated that reducing drinking in late adolescence is important as it may prevent long-term adverse consequences and more immediate harm (McCambridge et al., 2011).

An important population-based survey was conducted in Goa, India by Pillai et al. (2014) with a sample of 1899 participants age 20-49 to investigate the age of onset of drinking and the associated results in later life. The research was in two stages. The first stage comprised a screening interview that included current drinking status. The second stage comprised interviews with all current male drinkers and a sub-sample on non-drinkers to assess alcohol use patterns, problems, the age of drinking onset and adverse outcomes.

The researchers reported that this was the first population-based study in India to describe adolescent drinking onset among men and to examine the association between this and subsequent alcohol related outcomes in adults. They indicated that men from low-income urban areas were more likely to have been regular drinkers in adolescence (Pillai et al., 2014).

This study also found that adolescent drinking onset was associated with lifetime alcohol dependence, hazardous and harmful alcohol use, alcohol related injuries and psychological distress. Pillai et al. (2014) studied only men as female drinking is rare in India. The finding highlighted the need for policies and programmes to delay the onset drinking in India. Older individuals not recalling earlier drinking and maturation bias were recognised as limitations of the study.

A study in the USA by Grant and Dawson (1997) examined the prevalence of life-time alcohol abuse and dependence. Using a large sample of over 27,000 current and former drinkers aged 18 and over from the National Longitudinal Alcohol Epidemiologic Survey, they estimated the age at onset of alcohol use for each year from age 12 to 25 years. They assessed the relationship between age at onset of alcohol use and the odds of alcohol abuse and dependence in late adolescence and adulthood.

Results indicated a downward trend of alcohol dependence as a function of increasing age at onset of alcohol use (Grant & Dawson, 1997). In accordance with this finding, the researchers suggested that pre-adolescence and early adolescence are particularly vulnerable periods for the initiation of drinking and that early onset of alcohol use was a major public health concern in terms of its impact on adolescent morbidity and mortality and its greater risk of other drug use and abuse (Grant & Dawson, 1997).

According to this research, the rate of lifetime dependence declined from more than 40% among individuals who started drinking at ages 14 or younger to approximately 10% among those who started drinking at age 20 and older. Adolescents who initiate drinking before the age of 15 are about four times more likely to develop alcohol dependence later in life than those who abstain until they are at least 20 years of age (Grant & Dawson, 1997).

A study conducted by DeWit et al. (2000) in Canada examined the influence of first drinking age as a risk factor for developing alcohol related disorders in later life. Data were obtained from a community sample of life-long drinkers who participated in a mental health supplement of 1990-91, Ontario Health Survey. This study showed that individuals who began using alcohol in pre- and early adolescence (age 11-14) were most vulnerable to the risk of developing alcohol

disorders. DeWit et al. (2000) noted that first use of alcohol at adolescence has a risk of progression to the development of alcohol disorders and that prevention strategies to delay early alcohol use are critical.

Patterns of adolescent drinking

Patterns of adolescent drinking are not usually studied in isolation but emerge from more comprehensive studies of adolescents and alcohol. The research cited here demonstrates the diversity of patterns of alcohol consumption by young people.

Janssen, Mathijssen, van Bon-Martens, van Oers, and Garretsen (2014) conducted a qualitative study in Netherlands to explore the attitudes of adolescents to alcohol use and the role of parents and peers in adolescent alcohol use. Using a semi-structured interview guide, researchers conducted six focus group interviews with 12-17 year olds. They identified two different categories of adolescents: those who drank and those who did not use alcohol. Those who drank had positive attitudes towards alcohol; they believed that drinking was associated with fun. Most of those who drank had started because they were curious. Those who did not drink alcohol said that either they did not like the taste of alcohol or that they did not feel the need to drink alcohol (Janssen et al., 2014).

In this study, boys and girls of all ages 12-17 participated together. The researchers noted that the composition of the focus groups might have hindered the honest exchange of ideas. On the other hand, obtaining deeper insight into the attitudes towards alcohol and the role of their parents and peers were noted as strengths of the study.

A large quantitative study in the USA also revealed patterns of alcohol consumption among adolescents. A sample of 4088 students from year 6, 7 and 8 was surveyed by Getz and Bray (2005) to examine the patterns of alcohol consumption by adolescents and identify factors associated with adolescent drinking. The research, conducted in three waves over three years, was undertaken to determine whether adolescent drinking increased or decreased during the

three-year period. In this study, researchers used three drinking categories according to the level of drinking in a month: heavy users, experimental or moderate users and non-users.

The variables associated with adolescent drinking in this study are discussed in later sections, but it is of note that Getz and Bray (2005) found that mother's drinking, peer alcohol use, previous marijuana use, and age were important discriminators of adolescents who were heavy alcohol users when compared with those who were experimental and moderate drinkers.

It is clear from diverse studies that adolescence is a development stage and there are life-long consequences of early drinking, with different patterns of drinking by young people. Early age of consumption is a particular risk.

2.3 Factors influencing adolescent drinking

Adolescent drinking has already been set within a public health framework (Fig 1.3), a practical and policy-oriented approach to the problem. This framework has some parallels with the ecological systems approach proposed by Bronfenbrenner (1994) adolescents are influenced by fellow members of society, such as family, school and peers. In addition, the structure of society, including the economic situation and political system, also affects adolescent well-being (Bronfenbrenner, 1994).

The 'ecological circle' approach of Bronfenbrenner (1994) includes five levels: the Micro-system, Meso-system, Exo-system, Macro-system and Chrono-system. The Micro-system includes family, school, and peers where individuals experience day to day life and have interaction face to face with others in daily activity. The Meso-system comprises the linkage (not necessarily face-to-face) with other parties or institutions such as relationships between families and schools. The Exo-system includes media, neighbours, social services, and local politics and the way that these settings indirectly influence adolescent development. The Macro-system comprises the cultural norms, values and attitudes and other sources of knowledge and the structure of the society. The fifth level of this circle is the Chrono-system includes a time dimension and is specific to the individual's social and biological context. Bronfenbrenner's

analysis has been criticised as too complex to be operationalised for research purposes and is clearly too complex to be used as a conceptual framework for this study. However, the 'ecological circle' does confirm the need, expressed through the public health framework, to consider as many as possible of the factors influencing adolescent drinking, as the rest of this chapter aims to do.

2.3.1 Adolescent experience of drinking and its consequences

Underage drinking is associated with numerous negative consequences in adolescents' lives, and they drink alcohol for different reasons. Therefore, this section gives examples of studies dealing with adolescent drinking experiences, consequences, reasons and other matters related to alcohol.

Using a sample of 473 drinkers aged 15-18 Mair, Lipperman-Kreda, Gruenewald, Bersamin, and Grube (2015) investigated the association between problems experienced in the previous year and the frequency and amount of alcohol consumed in six specific drinking contexts in California. Data were collected through computer-assisted telephone interviews. There were three waves of sampling with data compiled for all adolescents who participated in the final wave of data collection.

Participants provided information regarding seven alcohol related problems in three domains over the previous year. The three domains were psychological consequences, alcohol-related violence, and conflict/trouble. Researchers used six distinct drinking contexts: parties, restaurants/bars, parking lots/street corners, beaches/parks, respondents' home without parents and someone else home without parents. Researchers used a context-specific dose response model to count the number of time participants used alcohol in distinct places (Mair et al., 2015).

In different drinking contexts, the frequency of drinking and the heavier drinking were important predictors of specific types of alcohol related problems. Psychological problems were associated with drinking more frequently in five of the six contexts in this research. The researchers further noted that drinking more heavily is not associated with greater psychological problems in any context.

Drinking more frequently in public places was associated with more conflict and trouble but it was not associated with heavy drinking. In contrast, the volumes of alcohol consumed at someone else's home without parents and at bars/restaurants were associated with greater violence. The researchers suggested that creating context-specific restrictions or increasing enforcement in selected contexts might help reduce alcohol consumption in this population. A number of limitations were noted in this research, including the limited potential for generalisability of results, not representing both rural and urban areas, and being unable to determine the direction of causality (Mair et al., 2015).

Fraga et al. (2011) conducted a mixed method cross-sectional study in Portugal to understand alcohol use among 13 year old school students. This study had both quantitative and qualitative components: a self-administered questionnaire to a sample of 2036 students, and a semi-structured interview (N=30). This study intended to assess the reason for and consequences of drinking as perceived by adolescents and discover their views on prevention strategies.

The results of this study demonstrated that more than 50% of 13 year olds had drunk alcoholic beverages at least once in their lifetime. There are likely cultural reasons for the high proportion of adolescents who had experienced alcohol by 13 years, probably due to the tradition of home consumption with meals. Results indicated that adolescents only identified minor and temporary consequences of drinking alcohol but most recognised that the drinking can be harmful and lead to addiction that is difficult to treat. However, participants only perceived the consequences for the person who drinks and not how this could affect others (Fraga et al., 2011). Despite the strengths of the mixed-method model which allowed both objective measures of behaviour and in-depth analysis of several features of this behaviour researchers noted that a limitation of the study may be related to not having enough information about parents' behaviour and parental roles (Fraga et al., 2011).

In contrast to the large quantitative or mixed methods studies reported above from western countries, a qualitative study from Brazil, a middle-income country, aimed to understand adolescent attitudes and behaviour towards alcohol consumption. Data were collected through semi-structured interviews from a sample of 40 adolescents between 12-20 years of age. Thematic analysis was used to interpret the information (da Silva & Padilha, 2011).

According to the thematic content analysis, the researchers identified two types of drinking behaviour. The first was alcohol consumption in its various forms and situations, with beer the most popular drink for leisure and recreation purposes. The second was alcohol as a pathway to other drugs, leading young people to use illegal drugs such as marijuana and cocaine (da Silva & Padilha, 2011). da Silva and Padilha (2011) also reported that adolescents drink alcohol for fun and as a solution to problems, and sometimes they drink to feel a full member of the group attending a party or other occasion. The research also demonstrated that alcohol promotes socialisation and enjoyment for adolescents, but that consumption of alcohol increases due to easy access.

2.3.2 Adolescent alcohol attitudes and behaviour in relation to parents' alcohol use

This section reviews a number of studies have recognised the influence of parental alcohol use on adolescent behaviour in relation to alcohol.

A longitudinal study by Mares et al. (2011), examined the role of parents' alcohol use, parents' alcohol-related problems, and attitudes towards youth alcohol use in alcohol-specific communication. This study consisted of 428 Dutch families, both parents and adolescents, with adolescents aged 13-15. They have surveyed annually for five years. Parents' alcohol consumption, parents' alcohol related problems, parents' alcohol-specific attitudes, alcohol-specific communication, adolescents' excessive drinking and adolescents' alcohol-specific problems areas were included in the questionnaire (Mares et al., 2011).

The results of this study recognised the different impact of paternal and maternal factors on adolescent drinking. When fathers express strict alcohol-specific attitudes both parents talk more often about alcohol with their children but the attitudes of mothers did not show this effect. However, the research indicated that paternal strict alcohol-specific attitudes about alcohol were associated with lower adolescent alcohol use. The researchers emphasised that both parents' alcohol use and the alcohol related problems were associated with excessive drinking by adolescents (Mares et al., 2011).

Longitudinal studies, such as Mares et al. (2011) are not common, with cross-sectional surveys more usual. A cross-sectional study conducted by Loke and Mak (2013) examined the family process, parenting style and the influence of friends' substance use on risk behaviour of adolescents. The questionnaire used in this study included questions on students' perceptions of family process, substance use (smoking, drinking and alcohol and using drugs), their parents' and friends' smoking behaviour, their acceptance of smoking, the demographic characteristics of the adolescents and their family structure. The researchers reported that most of the questions had been used in previous research and they adopted and modified questions to suit their context, with content validity assessed by a panel of three experts (Loke & Mak, 2013). A sample of 805 adolescents completed the questionnaires. Sample participants were categorised into two age groups: 11-15 and 16-18, with more boys (73%) than girls (27%) in the study.

Loke and Mak (2013) found that more participants had fathers than mothers who smoke or use alcohol. About one quarter of students had friends who smoked or drank alcohol. They noted that more of the adolescents were satisfied with role fulfilment by their mothers than by their fathers (Loke & Mak, 2013). Loke and Mak (2013) reported that as children look up to their parents as role models, adolescents saw parents' smoking or drinking as acceptable behaviour which they can emulate. The findings confirmed that the smoking or drinking habits of parents were associated with adolescent smoking and drinking.

Loke and Mak (2013) concluded that familial influences were important factors in the development of adolescents. As parents are role models, parents provide support and control to guide their adolescents in their development. The quality of the parent-child relationship was another factor influencing the development of risk behaviour. A poor child-parent relationship, as reflected by less time spent in activities together and increased conflict between adolescents and with parents, was a factor associated with risky behaviour. On the other hand, parents with warmth, love, care, acceptance, respect, and appropriate level of monitoring could encourage positive psychosocial development in adolescents (Loke & Mak, 2013).

The researchers identified the inability to make causal inferences and the self-reported data as limitations of this study.

A cross-sectional study conducted in Illinois (USA) was part of a larger research project on adolescents. The sample comprised 259 students aged 14-18 with the study seeking adolescents' self-reported perceptions of four types of parental messages that may influence alcohol use intentions. Those four messages were parents' references to the negative consequences of alcohol use, parents' references to their own past experiences with alcohol use, parents' conditional permissive messages and parents' views on drinking alcohol responsibly (Kam, Basinger, & Abendschein, 2017).

This study examined how parent-child alcohol-specific verbal messages indirectly related to adolescents' alcohol use intentions, focusing on parents' own experiences to create a 'teachable moment' to discuss alcohol with their children. Adolescents perceived their parents' conversations regarding parents' own experiences as a sign of honesty and trust. This study noted that adolescents learning behaviour from parents may be an important model (Kam et al., 2017).

Hoque and Ghuman (2012) conducted a cross-sectional study in South Africa with a total of 704 16-18 year old adolescents, to understand their perception of parental practices relating to adolescent alcohol use. The researchers examined adolescents' perceptions of their own alcohol use, parental alcohol use and the associated behaviour and family rules regarding alcohol use. They reported that 54% of participant adolescents have consumed alcohol at some time in their life. The study noted that a large number of mother/female guardians and father/male guardians do not allow drinking at home. Adolescents were more likely to use alcohol in households where parents drank. Hoque and Ghuman (2012) found a significant association between parental alcohol use and adolescent alcohol use, and parents' views on their adolescents' alcohol drinking.

The qualitative research from Portugal (noted above) from Fraga et al. (2011) also discussed alcohol consumption at home, perhaps reflecting cultural norms where drinking is acceptable at family meals. Adolescents who reported that they drink at home may reflect their parents' approval of their drinking and easy access to alcohol at home. On the other hand, researchers noted that parents may acquiesce to their adolescents drinking alcohol at home and their knowledge of their children's drinking may reflect efforts to protect adolescents from heavy drinking outside the home.

2.3.3 Peer influence and adolescents drinking

Peers are thought to supply the adolescents with the attitudes, motivations, and rationale to support anti-social behaviour as well as providing opportunities to engage in specific delinquent acts (Patterson, DeBaryshe, & Ramsey, 1989). Grusec (2011) emphasised that although peer relationships become more important in adolescence, they do not replace relationships with parents and that good parenting can reduce negative peer pressure.

A number of studies examined the peer influence and adolescents' alcohol use (Bray, Adams, Getz, & McQueen, 2003; Hong, Beaudoin, & Johnson, 2013; Janssen et al., 2014; Loke & Mak, 2013). Early adolescence is a time when peers play a particularly important role in shaping behaviours. Individuation, a key part of adolescence is an important psychological factor related to peer influence. Adolescents who have a low level of individuation are more likely to be influenced by friends and develop psychological and relational problems. Higher initial peer alcohol use was related to larger increases in adolescent alcohol use (Bray et al., 2003). Alcohol abuse may be due to difficulties with the individuation process through emotional function or separation and detachment between adolescents and parents (Bray et al., 2003).

In a major longitudinal study in Upper New York State, with a sample of 2573 high school students, Nash et al. (2005) examined the relationships among family environment, peer influence, stress, self-efficacy and adolescents' alcohol use. The study found that as adolescents begin spending more time with their friends and less time under parental supervision, influence shifts from parents to peers. Adolescents with more positive family environments demonstrated greater self-efficacy in refusing alcohol use and were less susceptible to peer influence enticing them to drink. Peer influence and stress were positively related to subsequent alcohol use whereas self-efficacy was negatively related to it.

Adolescents who had greater parental disapproval of alcohol use had more positive family environments and greater self-efficacy for avoiding alcohol use and fewer peers that drank alcohol (Nash et al., 2005). The peer group is the major training ground for delinquent acts and alcohol use. Although the influence of peers on alcohol use was of a greater magnitude, a positive family environment including parental monitoring, acceptance and good parent-child

communication limited the potentially negative impact of peers' drinking behaviour (Nash et al., 2005).

A prospective study conducted by Trucco, Colder, and Wieczorek (2011), as part of the Upper New York State study (above), with a sample of 371 students aged 11-13, identified the relationship between adolescents' delinquent behaviour, perceived peer approval and use of alcohol. The results of the study show that the high level of perceived peer delinquency was associated with high level of perceived peer approval and alcohol use. High levels of perceived peer approval and alcohol use were associated with early initiation of alcohol use (Trucco et al., 2011).

Outside the US, a cross-sectional study by Wu, Chong, Cheng, and Chen (2007) in Taiwan investigated family relationships, deviant peer influence and adolescent alcohol use in a sample of 780 grade nine students. Measures of family characteristics, school factors and peer influence were used, with peer influence including peer relationships, deviant peer behaviour and alcohol use. The study reported that substance use was predicted by perceptions of poor family relationships and deviant peer relationships (Wu et al., 2007). There are two major limitations in this study: that cross-sectional research did not allow causal inference and all family, school and peers measures were self-reported.

A study in the Netherlands used multiple data sources to examine whether the association between friends' drinking norms and male adolescent alcohol use was moderated by peer influence. Using a sample of 73 male adolescents with the average age of 17 years, the study comprised three parts: a baseline class-room questionnaire assessment, a chat room experience and a multiple time diary assessments to measure alcohol use. Peer influence susceptibility was defined as the change in adolescent responses before and after exposure to peer norms (Teunissen et al., 2016).

Results of this study indicated that relationships between friends' drinking norms and the adolescents' alcohol use were moderated by susceptibility to the pro-alcohol norms of popular peers. Further, the researchers noted that behavioural measures of peer influence susceptibility could be useful in alcohol prevention programmes.

Adolescents experience peer influence that can lead to negative behaviour in adolescents' lives. According to the previous research, although the peer group is a major training ground for adolescents' alcohol use, a positive family environment and effective parental engagement can deter the negative influence of peers in adolescents' lives.

2.3.4 Environmental influences on adolescent alcohol use

As suggested by the public health and ecological models discussed in the previous chapter, environmental factors influencing adolescent alcohol consumption can operate at a number of levels. This section gives a brief indication of environmental factors operating at neighbourhood, school and economic levels.

The New York longitudinal study mentioned in the previous section also provided the opportunity to investigate the potential influences of contextual factors within a developmental-ecological model of alcohol initiation in adolescence (Trucco, Colder, Wieczorek, Lengua, & Hawk, 2014). The model included neighbourhood, peers, parents and individual level factors. Using a sample of 387 families with adolescents age 10 to 14, the research measures were neighbourhood disadvantage, neighbourhood cohesion, positive parenting, rule breaking, peer delinquency, family socioeconomic status and adolescent alcohol use.

The findings of this research suggested that a high level of neighbourhood disadvantage was associated with a high level of adolescent alcohol use. Findings also showed that both negative peer influence and adolescent alcohol use were predicted by low levels of positive parenting. It is important to note that this research emphasised personal interactions within a micro-system of society, and relationships between this level and higher level neighbourhood factors (Trucco et al., 2014).

There were some limitations of the research. Sampling comprised only early adolescents and the researchers recommended sampling older age groups. They also suggested that to be able to generalise the results a more ethnically representative sample would be required. Other

limitations of this research were the use of youth-self report and the need for more accurate measures of parenting (Trucco et al., 2014).

A longitudinal study conducted by Tomczyk, Isensee, and Hanewinkel (2015) in Germany analysed the school climate and the association between peers and adolescents' alcohol use. A sample of 2490 children participated in the final stage of the study. At baseline, the participants' mean age was 10.8 years and 13.3 years at 36 months follow up. The measures were assessed by a self-reported questionnaire.

School climate contained two dimensions, class climate and school organisation. School organisation referred to the structural components of school life: size of staff, student-to-teacher ratio, and location of alcohol. Class climate referred to more personal connections such as student-teacher relationships, the atmosphere in class, perceived interaction and friendliness within the class. Outcomes were adolescents drinking, lifetime alcohol use, frequency and amount of drinking and binge drinking. Peer alcohol use was also included as a variable (Tomczyk et al., 2015).

According to Tomczyk et al. (2015), the findings of this study indicated the significant moderating and mediating effects of school climate. Class climate mediates the association between peers and adolescent alcohol use. A positive class climate was associated with lower alcohol-related outcomes among students and peers. School organisation variables have a significant moderating influence on the association between peer and adolescent alcohol use. Teacher-student ratios were associated with adolescents' alcohol use, when teacher-student ratios were higher, the greater the adolescents' problem behaviour.

Limitations of the research included a high dropout of older male participants over the 36 months and few measures of aspects of class climate and school organisation and lack of cultural diversity in the sample. On the other hand, the large sample size from different school types and the advantage of the longitudinal study were considered strengths of the study (Tomczyk et al., 2015).

A growing body of research has investigated the importance of the economic environment on adolescent alcohol consumption (Gosselt, Strump, & Hoof, 2015; Jernigan et al., 2017; Rowland et al., 2014). Shih et al. (2015) investigated the cross-sectional association between alcohol

outlets density and adolescent alcohol use. A total of 2,721 adolescents from 10-16 years of age were sampled as part of a large longitudinal study of middle school students in California. There were five waves of investigation over 30 months, with only those living in California for the full period selected for the final wave.

Shih et al. (2015) identified three types of alcohol outlets: off-premises alcohol outlets which included grocery and convenience stores, all on-premises alcohol outlets including restaurants, bars, clubs and hotels, and on-premises alcohol outlets where minors were not allowed. They used two indicators of alcohol use by adolescents: any lifetime use but not in past month and any heavy use in the past month.

According to Shih et al. (2015), findings showed higher levels of on- and off-premise outlets within 0.10, 0.25 and 0.50 miles around respondents' homes was associated with higher odds of being a heavy drinker. Findings also suggested that youth who are exposed to higher densities of on-premises alcohol outlets were at risk for both lifetime use and heavy drinking. The researchers suggested that it is important to reduce the number of alcohol outlets in neighbourhoods where minors reside and increase enforcement to limit distribution to minors. (Shih et al., 2015).

Linked to the presence of retail outlets is the issue of marketing alcohol. According to a systematic review, when youth have greater exposure to alcohol through marketing affects it encourages early initiation and binge and hazardous drinking among youth (Jernigan et al., 2017).

A bi-annual cross-sectional study was conducted in Finland to examine the changes of alcohol use among adolescents from the perspective of alcohol policies in a 30 year time frame; from 1981 to 2011. The purpose of this study was to understand the how alcohol policies influence adolescents' drinking over the period and the trends in adolescents' drinking. there were 99 724 participants in the study and the representative participants' sample age was 12-, 14-, 16- and 18-. A paper questionnaire and an internet form were used to collect the data (Lintonen, Karlsson, Nevalainen, & Konu, 2013).

Drinking among 18 year olds increased throughout the period. However, twelve year olds seemed not affected by any policy changes and their alcohol drinking remained throughout the period. A sharp increased was predicted from 2003 to 2005 as a result of policy changes. This study emphasised that the drinking decreased from 2005 to 2011 due to tightening of alcohol policy including tax increase. Although, younger age drinking was increased, according to Lintonen et al. (2013), alcohol policy changes between 2005 to 2011 seemed not have had noticeable influence in alcohol drinking or drunkenness among the underaged in Finland.

A mixed methods study conducted by Roy, Ikonen, Keinonen, and Kumar (2017) in India to understand adolescents' perception of alcohol and how these perceptions are related to their attitudes towards their social surroundings and the media. The sample size was 379, 216 male and 163 female and the average age was 13.6. In this research, school students participants were told that "media is any methods of communication written, auditory, or image based" and moreover, advertisements, bill boards, newspapers, pamphlet, magazine, radio, TV content, etc. counted as media.

Results showed that most popular medium among participants was TV followed by books, internet, newspapers and radio. Both boys and girls were equally suspicious of the reliability of information offered by the media. Participants also admitted that there was a relationship between songs, advertisement and movies and their life style. Therefore, songs, advertisements and movies have been potential to misinform them. This research also noted that as participants are from urban areas only, this limits the genarasibility of the findings (Roy et al., 2017).

A systematic review conducted by Anderson, de Bruijn, Angus, Gordon, and Hastings (2009) surveys the association between alcohol advertising and promotion, the portrayal of alcohol in mass media an adolescent drinking. After considering the studies, and applying exclusion criteria, 13 longitudinal studies were reviewed in this study. This review included adolescents 18 years of age or younger and where the legal drinking age of 21 years was taken as the cutoff.

Self-reported drinking status were included as outcome measures. Twelve of the thirteen studies indicated that the advertising exposure increased both the onset of drinking among non-drinkers and level of consumption among existing drinkers. Therefore, Anderson et al. (2009) concluded that alcohol advertising and promotion increases the likelihood that adolescents will start to use

alcohol and to drink more if they are already using alcohol. Some noted limitations of the review were including only 13 studies for the review, the possibility that publication bias may have affected the conclusions and the way in which exposure to advertising was operationalised varies across studies (Anderson et al., 2009).

The evidence from these research findings shows that the peers, schools and the environment are important factors linked to adolescent behaviour, including adolescent alcohol consumption. Understanding how adolescents' access to alcohol and the commercial environment such as availability of alcohol products, the density of outlets and type of outlets are important. Further, previous research indicated that positive school climate and the community moderate positive behaviour of adolescents.

2.4 Parental engagement and adolescent alcohol consumption

According to ecological theory and some of the research already presented in this chapter, the family is an important structure and the foundation of child development, with parents making a major contribution (Wiium & Wold, 2009).

A systematic review of youth alcohol use emphasised that high quality parenting can contribute to reducing youth alcohol consumption. Findings from these studies revealed that young people who have positive relationships with their parents tend not to drink According to the review, it is important for adolescents to have positive role models in their life since they learn from those around them, particularly their parents (Huang et al., 2011).

Another review of adolescent development and parenting suggested that positive parental practices are protective factors in influencing adolescents' lives. This review also noted that high quality parenting such as open parent-child communication, parental monitoring and supervision leads to better outcomes for their adolescents (DeVore & Ginsburg, 2005).

As parental practices are one of the most important protective factors in healthy adolescent development, this section discusses the parent's role, different parental engagement styles, and

the impact of parent-child relationships on adolescent behaviour, and considers how negative and positive parenting styles might influence adolescent alcohol consumption.

2.4.1 Parents and parental engagement in adolescents' lives and alcohol behaviour

In most cultures, parent-child relationships are the major context of early socialisation. Parents are significant for a number of reasons. First, they teach the young how to regulate emotions and live safely with others. Then, parents build a warm and affectionate relationship, which facilitates the socialisation process. Parents are powerful as socialisers because they are in a position to manage their children's environments to ensure that they are exposed to positive social influences (Grusec, 2011). Although children have other sources of influences, for example, siblings, peers and neighbours, they are socialised by their parents to positive social outcomes. Socialisation occurs in different domains depending on the nature of the relationship between parent and child. Each domain has its own mechanism of operation and is associated with a different set of outcomes (Grusec, 2011).

Some research has noted that the family is the primary source of transmission of cultural factors that may underpin individual differences in adolescents' behaviour (Loke & Mak, 2013; Mares et al., 2011). According to Grusec (2011) cultures have been categorised as either individualist (western industrialised: valuing independence, autonomy, equality with parents, and self-assertion) or collectivist (most of the rest of the world: valuing lifelong obligation to family, family harmony and restrained emotional expression). Therefore, socialisation processes may differ across cultures and enhance different goals and values in adolescents' lives. Also, similar parenting styles may have different impacts on adolescents in different cultural contexts. In Asian cultures, parent-child relationships remain central throughout the whole life-course, therefore research findings on adolescent behaviour in western and non-western cultures may differ (Peterson et al., 2015).

According to Yatchmenoff (2005) engagement is defined as forming a relationship, establishing a goal, developing trust, or any other aspect of the helping process. Ideally, parental engagement

involves helping adolescents avoid unhealthy behaviour and improve their health and development (Centres for Disease Control and Prevention US, 2012).

Various studies have identified the impact of parental engagement on adolescent alcohol behaviour. A longitudinal study by Nash et al. (2005), a cross-sectional study by Tuttle (1995), qualitative studies by Bourdeau et al. (2012) and Gilligan and Kypri (2012) recognised the relationship between parental engagement and adolescent alcohol use. These studies suggested that family support is an important context for the prevention of alcohol and substance abuse during adolescence.

Ryan et al. (2011) conducted a Delphi consensus study to understand parental strategies regarding adolescents' alcohol consumption in Australia. They obtained expert consensus on the parenting strategies effective in preventing and reducing adolescent alcohol consumption (Ryan et al., 2011) and noted a significant relationship between parental engagement and adolescent alcohol use. Furthermore, findings suggested a comprehensive set of parental strategies for preventing and reducing adolescents alcohol use and identified those parenting strategies likely to be effective in preventing or reducing adolescent alcohol consumption (Ryan et al., 2011).

A review of the literature by Steinberg & Morris, (2001) on parent-adolescent relationships, adolescent problem behaviour, puberty, the development of the self and peer relations demonstrated that parental engagement with their adolescents could lead towards increasing competence and psychological well-being in adolescents' lives and contribute to healthy adolescent development. Parental engagement makes the child more receptive to parental influence, enabling more effective and efficient socialisation. Those adolescents are less likely to engage in alcohol use (Steinberg, 2001).

A qualitative study by Parvizy et al. (2005) investigating adolescent perspectives on addiction indicated that the parental influence is an important factor in developing a healthy life-style for adolescents. One of the five themes that emerged from interviews with 41 adolescents in Tehran included the relationship between family, health and addiction. The study noted that this emerging theme contained three subthemes: parents as role models, parents as indifferent and hidden drug abuse.

Parvizy et al. (2005) reported that participants perceived that exhausted parents, who hold several jobs, who do not understand their children's development needs and are completely out of touch with them can be a major reason for adolescents' substance abuse. Overall results suggest that effective family relationships are important for adolescents to develop healthy life-styles (Parvizy et al., 2005).

Parents engage using different parental strategies, styles, and approaches to support the development and health of adolescents. A comprehensive set of parenting strategies, styles and approaches have been identified through previous studies on parent-child relationships on alcohol initiation and alcohol use, with the key components of parental engagement being monitoring, controlling, and communication (Fletcher et al., 2004; Kao & Carter, 2013; Nash et al., 2005).

In one recent example, Kao and Carter (2013) examined the family influence on adolescents' sexual activity and alcohol use. This longitudinal study in the USA of adolescents age 11-16 found that disapproving parental attitudes, family-child relationship and adolescents' communication with their mother were protective factors against adolescents' alcohol use. Although researchers did not establish any causal relationship, they verified the importance of parental influence on the development of adolescent health behaviour, including decisions about when to consume alcohol.

Overall, research indicates a diversity of ways in which parents engage with their children. Research demonstrates that controlling, warmth, affection, monitoring, and communication are commonly parental approaches that can achieve success in modifying adolescent behaviour, including in relation to alcohol use (Harris-McKoy & Cui, 2012; Parvizy et al., 2005; Pasch et al., 2010; Ryan et al., 2011; Steinberg, 2001; Turrisi et al., 2000; van der Vorst et al., 2007).

2.5 Components of parental engagement

Parents engage with their adolescents in a variety of ways to ensure that the protective influence of positive parental practices encourages healthy and positive outcomes for adolescents. The following sections discuss the three parental engagement styles: parental communication

monitoring, and controlling and describe how these can generate positive or negative influences on adolescents' lives.

2.5.1 Communication

Effective communication between parents and children is considered an important characteristic of good family functioning. Particularly, when children reach adolescence and begin to establish a clear sense of their own identity and an ability to make decisions for themselves, parents' verbal communication is the direct way of expressing parental ideas and thoughts to their adolescents (Jackson et al., 1998). Although some research on the effect of alcohol-specific communication has provided inconsistent findings, a number of important studies examined and noted the relationship between adolescent-parent communication and adolescents' alcohol use and other related problems (Boyle & Boekeloo, 2009; Mares et al., 2011; Martyn et al., 2009; van der Vorst et al., 2010).

A longitudinal study conducted by Mares et al. (2011) recognised the role of parental alcohol use, parents' alcohol-related problems, and alcohol-specific attitudes towards youth alcohol use in alcohol related communication. Mares et al., (2011) examined the association of alcohol-specific parent-child communication with excessive adolescent alcohol use and alcohol related problems. Most research on parent-child communication focuses on problematic adolescent alcohol use. In this particular research, the parent-child communication was examined in relation to parents' own drinking.

A sample of 428 Dutch families including the father, mother and adolescents from two age groups were surveyed three times in 5 years. The study used samples from families with at least two children aged 13-16 years. An alcohol-specific communication scale consisted of eight specific domains: negative consequences of use, peer pressure resistance, encouragement to choose non-drinking friends, media portrayal of alcohol, encouragement not to use, telling the adolescents not to use, and rules about use and discipline.

Mares et al. (2011) found that parental alcohol problems were strongly associated with the frequency of parent-child alcohol-specific communication. Parents communicated more about alcohol with their children when they experienced problems due to their own drinking. When mothers communicated with their children about alcohol, this was associated with lower levels of adolescent alcohol related problems.

The researchers emphasised that the parent-child communication may not be effective at all times and noted that further research is necessary to determine which aspects of parental communication, and the quality of the conversation, can lead to lower the adolescent alcohol consumption,

Martyn et al. (2009) identified the mediating effects of parent-adolescent communication on the relationship between risk and protective factors and adolescent alcohol use. This cross-sectional study included 829 adolescents in Mexico aged 14-17. Individual factors, family factors, parent-adolescent communication, and adolescent alcohol use were used as measures. Age, gender, academic goals, and religion were considered as individual risk and protective factors (Martyn et al., 2009).

Familialism, defined as the adolescent beliefs and values about families, and family intimacy were considered as family risk and protective factors. Family intimacy was defined as the adolescents' perception of his or her own family connectedness or unity. The study's results indicated that parent-adolescent communication mediated the effect of family intimacy on ever having used alcohol (Martyn et al., 2009). Greater family intimacy was significantly correlated with higher levels of parent-adolescent communication. Stronger parent-adolescent communication was associated with lower alcohol use. However, the results of this study showed that there was no significant direct relationship between academic goals, religiosity, or familialism and adolescent alcohol use. This indicates that adolescent desires, beliefs, and values do not have as much direct influence on alcohol use behaviour as family intimacy and parent-adolescent communication (Martyn et al., 2009).

A longitudinal study of 428 Dutch adolescents aged 13-16 years examined the bi-directional effects of the frequency of parents' alcohol-specific communication and early adolescent alcohol use (van der Vorst et al., 2010). In this study, researchers recognised verbal communication as

the most direct way for parents to express their thoughts, rules, and concerns about alcohol to their children, and researchers used this to define alcohol-specific communication. Research results indicated that more frequent alcohol-specific communication increased adolescents' alcohol use but that high quality communication on topics such as negative consequences about alcohol was linked to lower levels of adolescent alcohol use (van der Vorst et al., 2010).

van der Vorst et al. (2010) recognised a need for more observational research aimed at understanding both the communication strategies parents use when talking about alcohol with their children and the quality of the parent's conversation. They indicated that the way in which frequency of communication develops over time determines the development of positive and negative communication patterns and the kind of alcohol-specific communication strategies parents use (van der Vorst et al., 2010).

Pasch et al. (2010) examined both parental and children's perception of parental engagement. The sample included 1373 grade six and eight students and parents in Chicago, and its design was both cross-sectional and longitudinal. According to Pasch et al. (2010), alcohol-specific communication between parents and adolescents has a strong relationship with adolescents' alcohol use. One of the strengths of this study was that both parents and students reported on the parenting practices. Additionally, the ethnic diversity and large sample size increased the strength of the study. However, different item sizes were used for different variables, and this may have undermined the reliability of the results. For example, the measure of parental monitoring consisted of one question for the child and two questions for the parents.

It is clear that parent-child communication is an important aspect of parenting style, as parental communication is the direct way of expressing parents' views on rules, thoughts and attitudes about alcohol. It is also clear that there are effective and positive parental approaches to communication that will assist in developing healthy lives for adolescents, particularly in relation to alcohol. Further research in this area will help to identify the different and effective aspects of parent-child communication that might prevent adolescent alcohol use.

2.5.2 Monitoring

High levels of parental monitoring deter adolescent misbehaviour. When parents are effective monitors, adolescents are less like to engage in problem behaviour including alcohol use. Ineffective parental monitoring may be due to lack of skills on the part of parents. Behavioural skills are essential to parental monitoring and need to vary with the age of adolescents. As a child matures, new monitoring skills are required to recognise adolescent behaviour (Dishion & McMahon, 1998). There are barriers that interfere with parental monitoring regardless of motivation and skill level. Life stress, poverty, unemployment, and health problems can undermine parents' best intentions to monitor their adolescents (Dishion & McMahon, 1998). Monitoring is widespread, and it reflects parental efforts to control and manage their children. Strong parental monitoring could both deter adolescents from engaging with alcohol in the first place and reduce the risk of future use (Stattin & Kerr, 2000).

Once children extend their activities and their education beyond the direct supervision and instruction of parents, more active parental monitoring is required. A longitudinal study by Laird, Pettit, Bates, and Dodge (2003) investigated parental monitoring over time. Sometimes monitoring has been associated with parental control consisting of imposed rules and restrictions on children's activities and monitoring adolescents, but current thinking aligns monitoring practices with a variety of information-gathering strategies, generally involving parents' awareness of their child's activities. In this study, parental knowledge was defined as parental monitoring, i.e. when parents have more knowledge about their adolescents it represents more parental monitoring.

The sample for this longitudinal study consisted of 396 adolescents aged 14 and their parents, with separate questionnaires for adolescents and parents. Laird et al. (2003) found that as children grow older and their activities, interests, and playmates change and expand, they begin to spend more time without direct adult supervision. As children begin to spend more time on their own, parents shift from in-person supervision to more distant forms of monitoring, using information gathered from sources such as teachers, peers, and self-disclosure (Laird et al., 2003).

Most studies of parental monitoring have been cross-sectional. Such a study by Stattin and Kerr (2000) in Sweden of 703 thirteen year olds and their parents investigated parental monitoring of children's behaviour. Again, these researchers used parental knowledge as a proxy for parental monitoring. They also noted that parents used different sources to gain knowledge about their children.

Stattin and Kerr (2000) used several domains of measurement to understand parental monitoring and the sources that provide whereabouts, activities and associations, child disclosure, parents' solicitation, and norm-breaking, parental control, parent-child relationship and family closeness.

Findings indicated that parents' knowledge came mainly from the child's disclosure and that this disclosure was the source of knowledge most closely linked to broad and narrow measures of undesirable behaviour. They also demonstrated that increased parental knowledge actually obviates the need for other measures of parental monitoring and is an appropriate strategy for parents to deter adolescents from engaging in the undesirable behaviour, including alcohol use. According to the analysis of both parents' and children's responses, the level of parental knowledge did not depend upon the sex of the parents (Stattin & Kerr, 2000).

A later cross-sectional survey was conducted with 6628 secondary school children aged between 11-16 years in Wales, UK. Family functioning, children's perceptions of parental attitudes towards deviant behaviour, family history of alcohol or substance use and age of first use of alcohol were used as measurements in this study. Family functioning contained 18 items with 4 subgroups. One of four subgroups was parental monitoring and researchers regarded parental monitoring as a protective factor (Moore, Rothwell, & Segrott, 2010). Approximately three-quarters of participants reported having tried alcohol, 65% of them when aged 12 or younger. Findings of this research showed a relationship between increased parental monitoring and less misuse of alcohol among young people. The role played by formal monitoring is ambiguous but seems like to be only one element of family interactions influencing children's alcohol use.

Arria et al. (2008) conducted a longitudinal study in the mid-Atlantic region in the USA to determine the impact of earlier parental monitoring on later college drinking. The study, sampling 1253 male and female students aged 17-19 years, examined the level of parental

monitoring during the last year of high school and how it related to alcohol consumption in the first year of college.

Two important measures were alcohol consumption in high school and college and parental monitoring during the last year of high school. To determine the parental monitoring, researchers adopted the previously used scale by Chilcoat, Dishion, and Anthony (1995) and developed the questionnaire with some word changes appropriate for older adolescents. This nine-item scale included questions on the adolescent's perceptions of parental rule setting, supervision and the consequences and monitoring (Arria et al., 2008).

Research findings indicated that higher levels of parental monitoring and supervision were associated with lower levels of high school alcohol consumption and college drinking. It appears that parental monitoring may exert an indirect protective effect on college drinking through its effect on high school drinking. Arria et al. (2008) also noted that initiatives that promote effective parenting might be an important strategy to curb high-risk drinking among even older adolescents, and emphasised the need to understand the nature and degree of parent-child communication necessary to extend the protective influence of parents into the college years.

Limitations of this research included the fact that measures of parental monitoring used are not the only facets of effective parenting and, as the research was based on student perceptions, may not reflect actual parent behaviour. Arria et al. (2008) also noted that other parenting behaviours such as parental communication and effective parent-child bonding are important in research.

Previously mentioned research conducted by Pasch et al. (2010) is particularly important since their study was able to determine whether the parent and child reports of parenting practices were consistent and to identify which practices were more strongly associated with alcohol use and intentions in early adolescence, regardless of whether it was reported by a parent or child. The researchers concluded that parent reporting of parental monitoring is better than the child's, but that children's reporting of parental communication is better, in both cross-sectional and longitudinal aspects of the study. The researchers noted that these findings have implications for comparing the results of studies and designing future research (Pasch et al., 2010).

Pasch et al. (2010) also suggested that increased perceptions of parental monitoring may be effective in deterring early adolescent alcohol use. Researchers suggested that adding more items for measuring parental monitoring could increase the validity of findings.

Findings from the studies presented suggested that parental monitoring appears important in influencing adolescent behaviour and higher levels of parental monitoring deter adolescent alcohol use. Parental monitoring involves gathering information about adolescents and indicates parental awareness and parents' knowledge about their adolescents. To reduce the delinquent adolescent behaviour, particularly in relation to alcohol, it is important to understand parental monitoring and ways to develop parents' knowledge.

2.5.3 Controlling

It is important for parents to be consistent when children are younger but in adolescence parental consistency is less important than having at least one parent who is authoritative (Steinberg, 2001). Adolescents are not fully mature, therefore providing parental guidance is still very important. Parents may need to renegotiate their parenting roles and modify their parenting behaviour to accommodate adolescent development during this unique period (Steinberg & Silk, 2002). During adolescence, the role of parental control becomes less clear and sometimes too much parental control could prevent adolescents exploring themselves. Another view is that parental control remains crucial for adolescents (Bourdeau et al., 2012; Harris-McKoy & Cui, 2012). In the meantime, Chong et al. (2014) reported that stricter parental controlling may generate negative emotions in adolescents.

Many studies have demonstrated the association between parental control and adolescent alcohol use. Parents can exert consistent and strong influence on their children's alcohol use throughout the adolescence, in particular by setting alcohol-specific rules. (Harris-McKoy & Cui, 2012; Koning et al., 2012; McKay, 2015; van der Vorst et al., 2007).

A quantitative study by Chong et al. (2014) in Kuala Lumpur investigated the effects of parental control on negative emotion and self-discipline of at-risk adolescents. A total of 84 adolescents

aged between 13-18 were sampled in this research. Three measures were used in the research: a self-discipline construct, a parental control construct and a negative emotion construct.

According to Chong et al. (2014) findings of showed a positive and statistically significant relationship between parental controlling and negative emotion, with high levels of parental control associated with more negative emotion within the respondents. Results also showed that parents who 'over-controlled' their children were seen to be restricting their freedom and causing unhappiness. Results suggested that parents should leave some personal space for adolescents and encourage them to develop a healthy personality.

In order to develop effective alcohol prevention programmes focusing on parents, it is essential to establish the direction of the association between alcohol-specific parental rules and adolescents' alcohol use. A longitudinal study conducted in the Netherlands, already discussed above, using data from both parents and adolescents, examined the bi-directional associations between providing alcohol-specific rules and adolescents' alcohol use (van der Vorst et al., 2007). The findings show that providing clear alcohol-specific rules can prevent initiation of alcohol consumption at younger ages. Adolescents who do not drink regularly seem to have their drinking controlled by such parental rules; however, imposing alcohol-specific rules did not prevent the alcohol use among adolescents who had already started to drink. (van der Vorst et al., 2007).

Another, more recent, study from the Netherlands considered whether parents who control their adolescent with strict rules about alcohol could be effective in decreasing adolescent alcohol use (Koning et al., 2012). This study examined parental worries about adolescent involvement in risk behaviour, parental worries about adolescent alcohol use, and to what extent parental worries influence their alcohol-specific parental rules and frequency and quality of communication about alcohol. This longitudinal study included 703 parents and adolescents aged 12 to 16 years.

Koning et al. (2012) measured adolescent's alcohol use, rules about alcohol, the frequency of communication about alcohol and quality of communication about alcohol. The parental rules about adolescent alcohol use were measured using a 10-item scale developed by van der Vorst, Engels, Meeus, Dekovic, and Van Leeuwe (2005). The questionnaire included questions such as whether their parents allow them to have alcohol at home or at parties (Koning et al., 2012).

This study found that alcohol-specific rules targeting the prevention of adolescent alcohol use generated positive effects. Sometimes parents who generally demonstrated less effective parental behaviour, but nevertheless worried more, set restrictive rules that resulted in less adolescent drinking. Koning et al. (2012) emphasised that to gain effective results a combination of parental rules and regular good quality communication are essential. Therefore, it is important not only to focus on parenting rules but also to have communication styles that convey these effectively. Researchers noted that using adolescents' self-reported data may reduce the reliability of findings.

Bourdeau et al. (2012) used semi-structured interviews in California to investigate the alcohol-specific rules used by parents of adolescents and to investigate how parents believed they had communicated the rules to their children. For this study, 174 parents of older adolescents (aged 15-18, living at home) from 100 families participated. In this qualitative study, researchers used questions: "what are the rules you've made about teens' use of alcohol?" "what are your beliefs about teenagers using alcohol, tobacco and other drugs"?

Three themes emerged in the analysis regarding the type of alcohol related rules used by parents; implicit rules, inconsistent rules and explicit rules. Whether parents use implicit or explicit rules, they used multiple strategies to convey these to their children. According to the findings of the study four strategies were used: communication with their teens; offering their teens alcohol under parental supervision to teach responsible drinking behaviour; use of their own behaviour as a model for conveying rules; and monitoring teens drinking during social activities.

The results of the research indicated that for some parents, alcohol use by adolescents is illegal and they do not want their children to engage in illegal behaviour. However, for other parents alcohol use is considered part of adult life and they want their children to develop socially acceptable drinking patterns while still at home (Bourdeau et al., 2012).

In the previously discussed research conducted by Mares et al. (2011), Dutch adolescents also reported their views on parental rules regarding adolescents' alcohol use. According to the findings of the research, fathers and mothers did not differ in their alcohol-specific attitudes. Strict parental alcohol attitudes had a preventive effect on excessive adolescent drinking. Alcohol-specific attitudes of fathers were predictive of excessive drinking in young adolescents.

Fathers might employ more indirect parental strategies such as holding strict attitudes while mothers used more direct strategies (Mares et al., 2011).

According to the research findings, there is evidence that parental rules affect adolescents' alcohol use. Importantly, research showed that parental control could have both positive and negative consequences for adolescents' alcohol use. The role of parental control, therefore, needs to be further explored.

2.6 Research overview and gaps

This review has scanned the literature on adolescent drinking, paying attention to both the influence of the wider social environment and the impact of parental engagement. These influences, which were summarised in Figure 1.3, are set out in Fig. 2.2 as a set of relationships at various levels that influence adolescent exposure and attitudes to alcohol, and its use. While some of these factors can be seen within a broad public health framework as 'determinants of health', there is also a micro-system of relationships (Bronfenbrenner, 1994) between parents and adolescents, described in the literature as 'parental engagement', that might counter the various environmental influences on adolescents and their alcohol use.

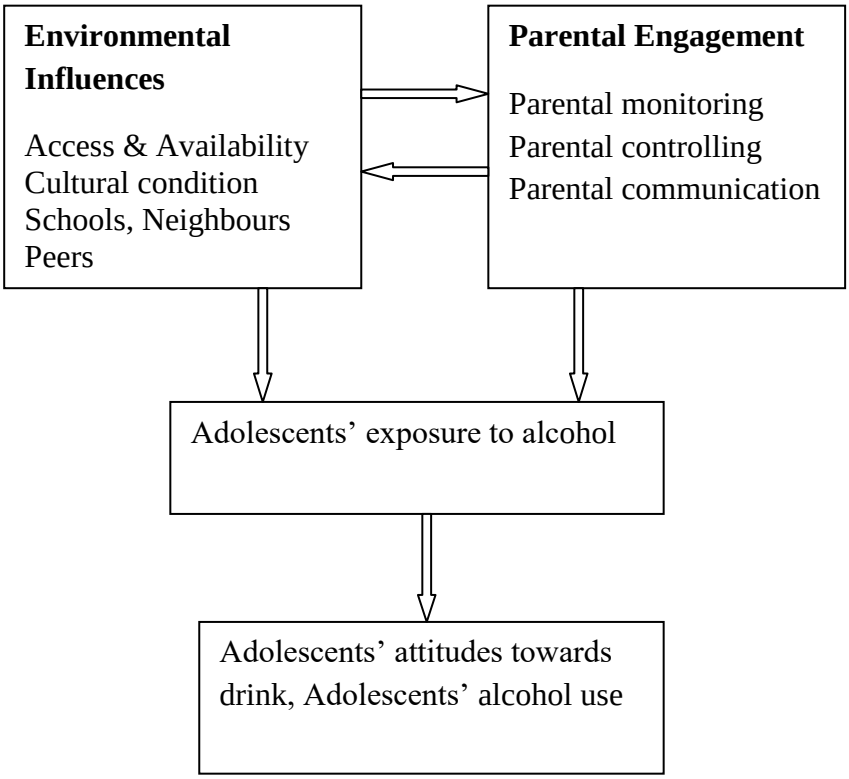

Figure 2.1 Framework for influence of parental engagement and other factors on adolescent alcohol use

Alcohol problems among young people in Sri Lanka have not been clearly understood and widespread illegal access to alcohol and shortage of data about the pressures on adolescents to drink may be important matters to assess. As Perera and Torabi (2009) suggest, there are urgent gaps in the knowledge of the wider environmental factors involved in alcohol consumption among young people. As Sri Lanka has its own customs, practices and values related to alcohol use and a social and political system that encourages illegal alcohol consumption, it is important to think of new ways of researching and thinking about ways to address adolescent alcohol consumption. Availability of alcohol for the population is not limited to legally produced alcohol in Sri Lanka. Although police and excise officers arrest people who produce illegal alcohol, it is a thriving and lucrative business supported by corrupt law enforcement people (Hettige & Paranagama, 2005).

Considering the ecological approach of Bronfenbrenner (1994), adolescents are members of society with different interactions in their lives. Community, neighbours, peers and schools are important determinants of early age alcohol use (Nash et al., 2005; Tomczyk et al., 2015; Trucco et al., 2014). Research set out in this chapter emphasised the negative effect of community and neighbours and the association with adolescent alcohol use. Research also noted adolescent involvement in risky behaviour and the part peers play in adolescents' lives. Peer connectedness also begins at the micro-level and it is connected to the adolescents' behaviour in meso- and exo-systems as they have close relationships with their friends. Therefore, developing research into adolescent alcohol use involves investigating some of these key relationships (Mason et al., 2016; Trucco et al., 2014).

According to Bronfenbrenner (1994), adolescent behaviour is significantly influenced by the micro-system of the family, with parents playing an important part. Adolescence is a time of transition for both parents and adolescents. On the one hand, adolescents should be given a room by parents to explore, develop and grow. On the other hand, adolescents are still not fully mature, therefore parents are very important providing guiding and monitoring (Steinberg, 2001). Some studies recognised that adolescents model their alcohol behaviour on their parents' patterns, context, and attitudes (Kam et al., 2017; Loke & Mak, 2013; Mares et al., 2011). Parent-child relationships such as parental engagement and parental attachment have been linked to adolescents' alcohol use in various studies, with attention paid the individual elements of parental engagement such as monitoring, controlling and communication. (Bourdeau et al., 2012; Ryan et al., 2011)**.** Fraga et al. (2011) noted that as adolescence is a key period for developing patterns of substance use and abuse that can continue into adulthood, it is the appropriate moment for prevention.

There has been extensive research relating to parental engagement and adolescents' alcohol use in western countries (Kao & Carter, 2013; van der Vorst et al., 2007; Zeigler et al., 2005). While there is some research in developing countries into problematic areas such as alcohol and poverty, high levels of alcohol consumption, alcohol related domestic violence, alcohol related sexual abuse and alcohol related crime, there is little work related to adolescent alcohol consumption (Abeyasinghe & Gunnell, 2008; Dissabandara et al., 2009; Sorensen et al., 2014).

In addition, there are no studies focusing on South Asian, including Sri Lankan, adolescent alcohol behaviour and parental engagement. The few studies from Sri Lanka and South East Asian countries on adolescent-parent relationship emphasised that their research findings are not always consistent with global findings since western culture is based on individuality and independence. Especially, Sri Lankan culture is based on collectivism (Pathirana, 2016) and at some point, new research is required to begin to address this.

The study by Pathirana (2016) on child-parent relationships in Sri Lanka found that majority of participants reported a happy, pleasant relationship, close bond and non-conflictive parent-child relationship. Further, the researchers indicated that adolescents who are engaged in a supportive and attentive relationship with their parents are very positive about their parents, but those with uncaring and distant relationships have negative attitudes towards their parents (Pathirana, 2016). Another study highlighted that since the parent-child connectedness is one of the major factors in adolescent health and risk-taking behaviour in Sri Lanka, addressing this is an immediate research need (Agampodi et al., 2008).

In view of the status of research into adolescent alcohol use in Sri Lanka, this research investigates some of the broader environmental influences as well as the role of parental engagement on this issue. The next chapter sets out the research methodology for this study.

Chapter 3 Research Methodology

3.1 Introduction

This chapter sets out the methodology of the thesis, including the rationale for a mixed methods research design and a description of the two specific research methods used: focus group interviews and a cross-sectional survey of adolescents in Sri Lanka.

3.2 Mixed Methods Research Design

3.2.1 Historical development of mixed methods research

The term ‘mixed methods’ describes the class of research where the researcher mixes or combines qualitative and quantitative research techniques, methods, approaches, concepts and languages into a single study. It focuses on collecting, analysing, and mixing both qualitative and quantitative data in a single study or series of studies (Johnson, Onwuegbuzie, & Turner, 2007).

Mixed method research is a synthesis of findings from data sources drawn from both qualitative and quantitative research. It is referred to as 'the third research paradigm' (Johnson et al., 2007), thereby recognising the importance of traditional qualitative and quantitative research but also offering the researcher a powerful third choice that, when qualitative and quantitative results are combined within an integrated project, may provide more informative, complete, balanced and useful research results (Johnson et al., 2007).

The origin of mixed methods can be traced to its use among fieldwork sociologists and cultural anthropologists early in the 20th century. Later, Campbell and Fiske (1959) successfully used multiple quantitative methods to study the validity of psychological traits and encouraged other researchers to employ multiple approaches to data collection in their studies (Denscombe, 2008).

The distinctive nature of the mixed methods approach and core ideas and practices on which the paradigm stands have been captured by Clark and Creswell (2011) and Tashakkori and Creswell (2007) in their work. Particularly, researchers understood that mixed methodologies could capitalise on the strengths of each type of method and minimise their weaknesses. Therefore, a

central premise of mixed methods became that the use of quantitative and qualitative approaches in combination provides a better understanding of research problems than either approach alone. As Morgan (1998) suggested, mixed methods may be the third paradigm capable of bridging the gap between the qualitative and the quantitative position.

The main benefits of mixed methods research have been well discussed in the literature. Doyle, Brady, and Byrne (2009) summarised the main rationales or benefits of undertaking mixed methods research (Table 3.1).

Table 3.1 The main benefits of mixed methods research

The main benefits of mixed methods research	
Triangulation	Allows for greater validity in a study by seeking corroboration between quantitative and qualitative data.
Completeness	Using a combination of research approaches provides a more complete and comprehensive picture of the study phenomenon.
Offsetting weakness and providing inferences	Utilising a mixed methods approach can allow for the limitations of each approach to be neutralised while strengths are built upon, thereby providing stronger and more accurate inferences.
Answering different research questions	Mixed methods research helps answer the research questions that cannot be answered by quantitative or qualitative methods alone and provides a greater collection of tools to meet the aims and objectives of a study.
Explanation of findings	Mixed methods studies can use one research approach to explain data generated from a study using the other research approaches.
Illustration of data	Using a qualitative research approach to illustrate quantitative findings can help paint a better picture of the phenomenon.
Hypotheses development and testing	A qualitative phase of a study may be undertaken to develop hypotheses to be tested in a follow-up quantitative phase.
Instrument development and testing	A qualitative study may generate items for inclusion in a questionnaire to be used in a quantitative phase of the study.

Source: (Doyle et al., 2009)

There has, however, been some criticism of mixed methods research (Denscombe, 2008). One of the key criticisms is that researchers often are not clear on how the findings from qualitative and quantitative data were integrated or linked to provide a fuller understanding of the phenomenon. Although there is a criticism regarding qualitative and quantitative data integration, Fetters, Curry, and Creswell (2013) describe how a researcher can enhance the value of mixed methods research by using specific approaches to integration. These approaches can be implemented in the design, methods and interpretation and reporting level of research (Fetters et al., 2013). In the current research, integration occurred first at the design level as qualitative findings assisted in the development of the quantitative instrument eg, the results of focus group discussions were used to develop the cross-sectional survey questionnaire for adolescents.

Other problems associated with mixed methods are that it is time consuming and expensive. It may also require researchers to work in multiple teams and necessitate training in methods and approaches and understanding how to mix them appropriately (Johnson & Onwuegbuzie, 2004). In contrast, Creswell and Tashakkori (2007) and Johnson and Onwuegbuzie (2004) argued that using both qualitative and quantitative data in a single study provides a better understanding of research problems than either approach alone. The goal of mixed methods is not to replace either of these approaches, but rather to draw from the strengths and minimise the weaknesses both in a single study and across studies. Identifying how these approaches can be used together in a single study to maximise the strengths and minimise the weakness of each approach is important (Johnson & Onwuegbuzie, 2004). Therefore, many researchers now apply mixed methods in their work, believing that using mixed methods at selected points in the research process allows for building on the strengths of each type of data collection and minimises the weaknesses of a single research approach (Johnson & Onwuegbuzie, 2004).

3.2.2 Mixed methods in health research

Health sciences and public health research issues are often highly complex and associated with many disciplinary perspectives, and may benefit from a mixed methods approach (Doyle et al., 2009; Gillian, 2011; Sandelowski, 2000). Historically, quantitative methods have dominated health research. In the quantitative paradigm, the researcher is considered independent and

objective using larger samples to test the carefully constructed hypothesis. The prevailing wisdom is that the researcher in the quantitative method can put aside values to avoid bias in a process of inquiry (Doyle et al., 2009).

Subsequently, qualitative research emerged as both alternative and complementary to a quantitative inquiry as researchers sought to examine the context of human experience. In this paradigm, the researcher is subjective with the focus directed at a deeper understanding of what is happening with a smaller sample (Doyle et al., 2009).

Health researchers have increasingly turned to mixed methods to expand the scope of and improve the analytic phase of their studies (Doyle et al., 2009; Fetters et al., 2013; O'Cathain, 2009). In particular, there have been benefits in using mixed methods to address the complex and multi-faceted research problems often encountered in the health field (Doyle et al., 2009). Connelly (2009) suggested that depending on the purpose, many different designs are possible in a mixed methods study and authors should be clear which approach is dominant in their studies.

Currently, mixed methods are emerging as an important paradigm in health research, particularly in relation to health behaviour. For example, and relevant to this thesis, there is a recent study in Spain which used mixed methods to examine the impact of measures regulating alcohol consumption among adolescents from the point of view of adolescents, parents and teachers. This research combined quantitative survey and a focus group interviews (March-Cerda et al., 2013). Focus group interviews included general opinions on the consumption of alcohol among minors, the scope and evolution of adolescent alcohol consumption in recent years, the roles of those involved and familiarity with an opinion existing regulatory measures. In addition, a survey questionnaire sought opinions on 17 regulatory measures.

March-Cerda et al. (2013) concluded that mixed methods techniques allowed the researchers to obtain a composite view of the opinion of participants. Further, they noted that the questionnaire used to measure the acceptance and impact of measures regulating alcohol consumption enabled researchers to make comparisons with other surveys and establish a basis for analysing the qualitative material.

Adalbjarnardottir (2002) conducted a mixed methods research in Iceland on adolescent psychosocial maturity and alcohol use. To explore the level of psychosocial maturity and psychosocial competencies, a sample of 1,198 Grade 10 students was surveyed concurrently at the ages of 15 and 17 and longitudinally across the two years from age 15 to 17. In the qualitative phase, the aim was to better understand an

adolescent's concerns, experience and growth; qualities beyond the general relationship between maturity level and drinking that the quantitative analysis could provide. The quantitative data were collected and analysed statistically. Interview data were analysed qualitatively; both thematically and developmentally to explore individual voices and provide a base for further hypotheses. Importantly, the researcher suggested that combining methods in a single study can provide broader and deeper understanding of the research phenomenon that would be useful in future research on adolescents (Adalbjarnardottir, 2002).

3.2.3 Options for studying adolescent drinking in Sri Lanka

There are several approaches to designing mixed methods research, with the design needing to be appropriate to the particular study. The different approaches for mixed methods design differ in their emphasis but also share many commonalities. In particular, each emphasises the overall problem, purpose and research questions that are guiding the study.

Fetters et al. (2013) described mixed methods approaches in terms of the level of integration and the different approaches researchers choose to mix. They are exploratory sequential design, explanatory sequential design and convergent design (Fetters et al., 2013). Prototypical phases of the three main mixed methods are shown in Figure. 3.1. In sequential designs, the intent is to have one phase of the mixed methods study build on the other, whereas in the convergent design the intent is that the qualitative and quantitative phases are designed and implemented independently, and the results merged or compared.

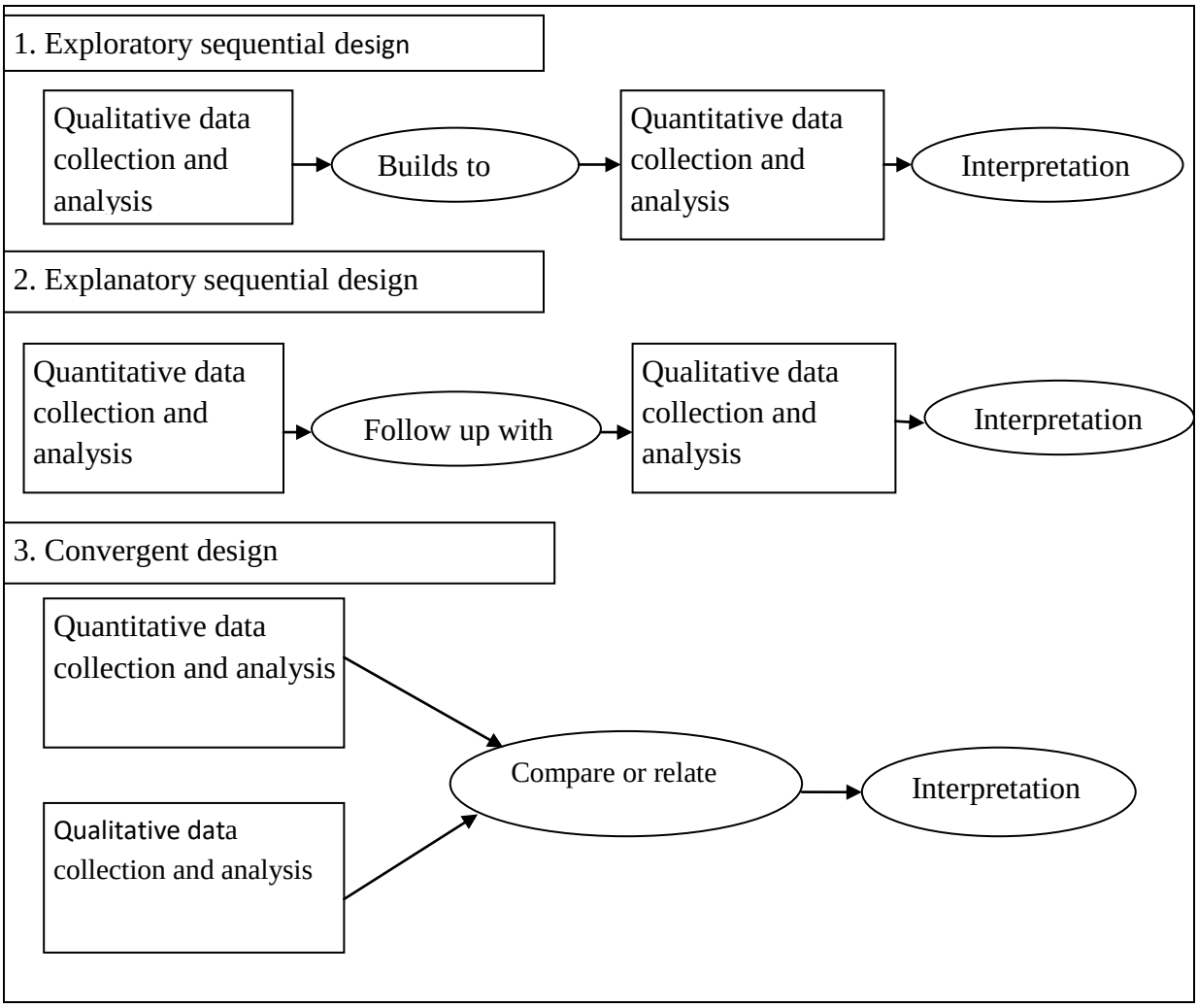

Figure 3.1 Prototypical phases of the three main mixed methods

Source: (Fetters et al., 2013)

An exploratory sequential design begins with and prioritises the collection and analysis of qualitative data. Building on the exploratory results, the researcher conducts the second, quantitative phase to generalise the initial findings. Then the research interprets how the quantitative results build on the initial qualitative results. In an explanatory sequential design, the researcher first collects and analyses quantitative data, then the findings inform qualitative data collection and analysis, the researcher interprets how the qualitative results help to explain the initial quantitative results. In a convergent design, the qualitative and quantitative data are collected and analysed during a same time frame.

All sequential designs share similar methodological strengths and weakness such as the substantial length of time it can take to complete data collection over two separate phases. Most of the time, the researcher has to make some key decisions about which findings from the initial phase will be focused on the subsequent phase in order to serve the best interests of the research. Concurrent mixed methods are those that converge or merge quantitative and qualitative data in order to provide a comprehensive analysis of the problem. The research questions are the most important component underlying methodological choices, such as defining the problem, identifying the design and data sources, analysing, interpreting and reporting results. The choice of a concurrent model is made to facilitate this perspective (Fetters et al., 2013; Johnson & Onwuegbuzie, 2004).

As explained in Chapter 2, despite an intensive search of the international literature, little research was found on alcohol among adolescents generally and no papers were found on parental engagement and adolescent drinking in Sri Lanka. Furthermore, literature on these topics relating to similar cultures such as Indian or any other South Asian cultures are limited. As confirmed in Chapter 2, special efforts made to locate research from South Asian countries on parental engagement and adolescents' alcohol use or behaviour were unsuccessful. Therefore, this research drew mainly on research from western countries. However, in terms of customs, practices and values relevant to alcohol use, there are significant differences between Western and South Asian countries (Perera & Torabi, 2012).

To achieve the aims of the study, therefore, an exploratory mixed method approach was considered most appropriate in order to develop appropriate research instruments for use in previously under-researched populations and on sensitive issues (adolescents and alcohol in Sri Lanka). Details of the research design and methods used are explained in the following sections.

3.3 Description of research design

The aims of this research were to determine adolescent attitudes to and use of alcohol, their perceptions of their social environment, including peers, in relation to alcohol and their views on parental engagement styles in relation to alcohol. The survey sample was drawn from government national school students aged 13-18 in urban areas in four school districts in Sri

Lanka. Although the World Health Organization categorises adolescents as between 10 and 19 years of age, the present study selected young people between 13and 18 years. It was thought that children 10-12 were too young to supply information and those aged 19 already had well-established attitudes to alcohol and may not have been at school. Urban areas were selected to assist in sampling students with similar life-styles and experience and for ease of recruitment.

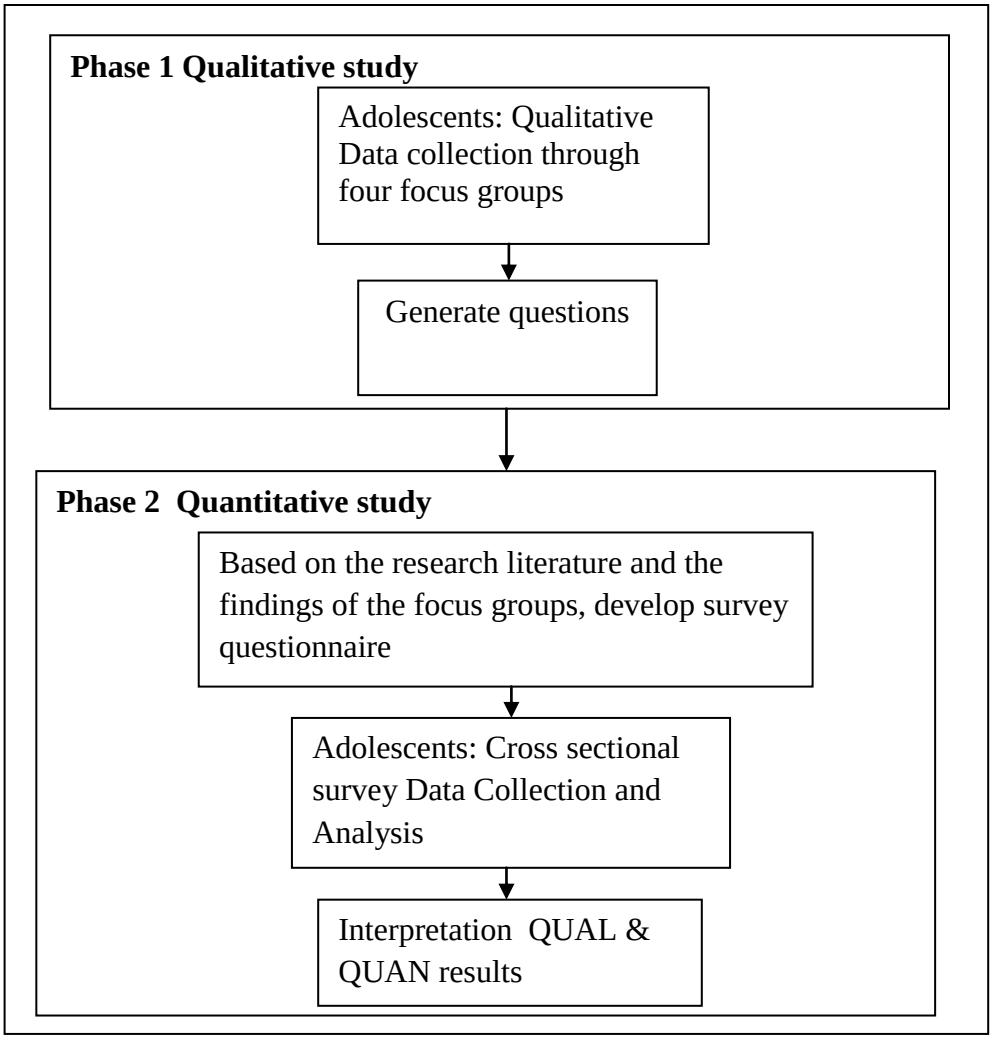

Figure 3.2 Design of focus group discussions and cross-sectional survey of adolescents

There were two phases of this research as set out in Figure 3.2. This design began with the collection and analysis of the qualitative data from four focus groups of school students. Building on results from the focus groups and the evidence from the literature, detailed research questions were developed for a cross-sectional survey of adolescents.

In this design, the qualitative and quantitative methods were initially connected through the development of the research instrument items. The method applied in this study included developing an interview guide and using focus group discussions to obtain information. In Phase 1 four focus group discussions were conducted with adolescents to identify themes regarding adolescents' perceptions of their own behaviour and parental engagement in relation to alcohol use. The focus group method described fully in section 3.4.

The quantitative phase, Phase 2 of the study, used a cross-sectional questionnaire to analyse the adolescent perceptions of their own alcohol use and behaviour and of parental engagement styles in relation to adolescents' alcohol attitudes and use. The questionnaire was based on existing instruments found in the literature combined with the findings of the focus group study. Details of the cross-sectional study are discussed in section 3.5.

3.4 Focus group study of adolescent drinking in Sri Lanka

Four focus groups were held with a total of 29 adolescents in the urban centres of Colombo, Gampaha, Kandy and Rathnapura.

3.4.1 Sampling

Convenience sampling, a type of non-probability sampling, was used for the selection of participants (Rodham et al., 2006). Four focus group discussions were held for adolescents living in urban areas in Sri Lanka.

For the focus group participants, adolescents aged between 13-18 were recruited from the urban districts of Colombo, Rathnepura, Kandy and Gampaha. Only one adolescent from an individual family was included. Both males and females were included in the same group. It was anticipated that the topic of alcohol consumption would not uncomfortable for discussion in the presence of the opposite gender and this might also generate different dynamics with complementary insights. Although female drinking is not common in Sri Lanka, according to previous research, most problematic drinking is related to the family system (Ariyasinghe, Abeysinghe, Siriwardhana, & Dassanayake, 2015; Dissabandara et al., 2009). Therefore, it is

important to understand female attitudes to alcohol to generate accurate insights into the phenomenon.

Satterfield (2000) suggested that focus group should be small enough to give everyone the opportunity to express their opinion but also large enough to provide a diversity of views. Therefore, each focus group in the current study included a minimum six and up to eight participants.

3.4.2 Recruitment

School students were recruited by the Healthy Lanka Development Pvt organisation, a non-government organisation funded by the Norwegian agency FORUT to undertake community and family interventions to tackle the use of alcohol and other drugs. Healthy Lanka district staff members put up posters on the Healthy Lanka district offices notice boards in the four selected urban areas, inviting potential adolescent participants to contact a named staff member from the Healthy Lanka research team who had signed a confidentiality agreement with the project. Potential adolescent participants expressed interest to the designated district office staff member and provided family contact information.

The designated staff member then contacted a parent, caregiver or guardian by telephone to confirm the age eligibility of the adolescent. In that conversation, the staff member introduced the purpose of the study and explained individuals would be recruited. The parent/caregiver or guardian of the adolescent provided the preliminary consent for their adolescent to participate in the focus group interview.

After the conversation, an information sheet and consent form, with a stamped return envelope, were sent to the parent/guardian detailing the purpose of the study, the expectations of participants and the means used to assure confidentiality. Information sheets and consent forms were developed in English and then translated into Sinhalese by the researcher and then back-translated by an independent person to ensure accuracy. All participants were given an information sheet and assent form in Sinhalese. Once written consent was received from the parent/guardian, adolescents were contacted by the Healthy Lanka staff member by phone. The project was then fully explained and formal assent sought. When consent/assent was available,

the staff member from the Healthy Lanka main office in Colombo contacted the participant to arrange the focus group interview dates. Consent form (Appendix A) and adolescents' information sheet (Appendix C) are attached.

The information sheet included details of the protection offered to participants including voluntary participation and freedom to withdraw at any time. Participating adolescents understood that the information from the study might be published, but that their contribution would be confidential and no identifiable information revealed in any report. Although, confidentiality of the information was included in the information sheet, at every focus group discussion the interviewer noted the importance of respecting each other's privacy.

Ethical approval for this part of the study was granted by the University of Canterbury Human Ethics Committee, the Approval number is 2014/106. Approval was also granted by the Healthy Lanka NGO, provisional upon receipt of University of Canterbury approval.

Table 3.2 Gender and age of focus group participants

	Focus Group A	Focus Group B	Focus Group C	Focus Group D
Gender				
Male	5	4	3	3
Female	3	4	3	4
Age				
13		1	2	
14	1	1	1	1
15	2	3	1	
16	2	1	1	2
17	1	2		2
18	2		1	2

In summary, 29 adolescents participated in four focus groups discussions. There were 14 female and 15 male participants ranging in age 13 to 18 years old. Fewest participants were aged 13 and most participants were aged 15 and 16.

3.4.3 Data collection

Participants were invited to the Healthy Lanka office in each district to participate in a specific focus group. Four focus groups were held each led by a trained interviewer and a research assistant. The interviewer was an experienced staff member from the Healthy Lanka research division and the Healthy Lanka office provided all facilities for the focus group discussion. The interviewer was trained by the researcher to create a safe environment with ground rules. The interviewer and the research assistant also signed confidentiality agreements. Before the focus group discussions, the researcher had several Skype discussions with the interviewer to explain the way that researcher expected the interviewer to conduct the focus group discussions. As the researcher expected rich information, the interviewer was asked to give adolescents time to have interactions and asked the interviewer to control any emotional situations, should they arise. There were no such concerns in any of the focus group interviews. In addition, the researcher encouraged the interviewer to keep the focus group discussion on track, drawing information from participants as much as possible, monitoring the length of discussion on particular topics and maintaining a neutral stance.

Participants were given the opportunity to view the interview guide and hear about the interview procedure. To enable everyone to express their views, the interviewer supplied guidelines to the group. The guidelines used for the focus groups are as follows:

- The most important rule is that only one person speaks at a time. There may be a temptation to jump in when someone is talking but please wait until they have finished.
- There are no right or wrong answers
- You do not have to speak in any particular order
- When you do have something to say, please do so. There are many of you in the group and it is important that I obtain the views of each of you
- You do not have to agree with the views of other people in the group

The researcher joined each focus group discussion via Skype as an observer and to take additional notes. Over the last few decades, the technological changes in the internet have developed an experience of online interviewing in qualitative research (Janghorban, Latifnejad Roudsari, & Taghipour, 2014). Remote interviewing is an alternative choice for researchers whose circumstances mean that a conventional approach to interviewing is not possible. In this case, the time and expense of travel to and within Sri Lanka from New Zealand precluded the researcher undertaking the focus group interviews in person. Nevertheless, researchers using this method must consider the authenticity, confidentiality and trustworthiness of the data collected (Janghorban et al., 2014). In this case, these were ensured by the presence of the researcher as an observer, the employment of trained and experienced research staff and the careful briefing of staff by the researcher.

The interview guide is set out in Appendix B and included such questions as:

Why do adolescents drink alcohol?

How do they get alcohol?

Do you think it is easy to buy alcohol at your age?

How do parents (yours? Your friends'?) approach the idea of young people drinking?

What are your own family rules for drinking alcohol?

What is your relationship with your parents regarding alcohol?

Each focus group interview took approximately one hour and this time-frame allowed a rapport to be established between the interviewer and the participants and for conversations to develop that generated rich data for the project. Interviews were recorded. Participants were treated to a meal and also reimbursed for transport costs. The interviews were conducted in Sinhalese and transcribed in Sinhalese by the researcher. The transcripts were then translated by the researcher into English.

3.4.4 Data analysis

As there were only four interviews it was possible for the transcribed data to be analysed manually by the researcher rather than requiring special software (eg NVivo).

Content analysis was used to achieve the study's goal. Content analysis is a method of analysing written, verbal or visual communication and as a research method, it is a systematic and objective means of describing and phenomena. This analysis frequently employed 'what, why and how' approach with the common patterns in the data sought by using a consistent of a set of codes to organise text with similar content (Zhang & Wildemuth, 2009).

The content analysis allows the researcher to test theoretical issues and enhance understanding of data. Through content analysis, it is possible to distil words into fewer content-related categories and the outcome of the content analysis is broader concepts or categories representing the experiences or views of (Cho & Lee, 2014; Elo & Kyngäs, 2008) participants

The content analysis process contained three main phases: preparation, organising and reporting. Beyond this, there are no fixed rules for analysing data and the key features of content analysis is that the many words of the text are classified into much smaller categories (Elo & Kyngäs, 2008)

Transcripts were read several times to ensure the accuracy of the transcription and translation. The next stage was the coding phase to identify possible themes. The features of the data considered pertinent to the research questions were coded into categories. The data was read and re-read with categories freely generated at this stage.

After this coding, the lists of categories were grouped under main headings. Subsequently, the number of categories was reduced by 'collapsing' those that were related to each other. Following this, the transcripts were again reviewed to identify elements of the data consistent with identified categories or which could contribute to additional categories. Main categories and subcategories under main categories are shown in Table 3.2.

At this point, any categories that did not have enough data to support them were discarded. Next, the researcher defined and named the main categories and sub-categories. A written analysis of each category with illustrative quotes is presented in Chapter 4.

Table 3.3 Main categories and subcategories generated from content analysis

Main Categories	**Alcohol and Adolescents**	**Adolescent-parent relationship in relation to alcohol**	**Alcohol and society**
Sub Categories	-Adolescents' motivation to drink alcohol -How adolescents access alcohol -Peer influence in adolescents alcohol use - Adolescents' views on drinking	-Family rules regarding alcohol use -Parental communication regarding adolescents' alcohol use -Parental monitoring regarding adolescents' alcohol use -Parental controlling regarding adolescents' alcohol use -Parental alcohol use behaviour -Parental knowledge about adolescents alcohol use -Parents influence in selecting friends	-Alcohol use and the gender difference in country -Adult alcohol behaviour in Sri Lanka -Legal age limit and adolescent alcohol use -Media influence on adolescents alcohol use

3.4.5 Trustworthiness of the research

Despite the great richness of the data offered by content analysis as a qualitative method, it also contains some limitations. The main criticism raised is the lack of standardised and scientifically rigorous procedure. Other than that the risk of a strong interference by the researcher, the lack of reproducibility and lack of generalisability are commonly discussed in the literature (Moretti et al., 2011). If the researcher standardises and specifies the procedures at every step, for example;

recruitment, data collection and analysis to the extent that the research process can replicate by others, then it is possible to describe the research as trustworthy.

This research was designed carefully to maintain the trustworthiness of the data. As researcher used the experiences working with adolescents and the researcher's strong commitment generating unbiased information to the field, researcher's own views did not influence any part of the process. Further, prior to the field data collection, interview guides were reviewed, discussed and refined by the researcher's supervisors.

As the researcher employed an interviewer, the researcher advised the interviewer to avoid bias and not to influence participants in any way in their responses. Before the interviews, the interviewer asked participants to respond to questions honestly. In addition, the researcher advised the interviewer to pay attention to building a relationship of trust between participants and interviewer in order to encourage participants to respond freely. Nevertheless, the researcher used Skype as an observer in order to ensure the trustworthiness of the data collection process (Janghorban et al., 2014).

Findings from the focus group discussions assisted with the development of the questionnaire for the second phase; the cross-sectional survey (see section 3.5), but provided an independent contextual understanding of the place of alcohol in urban families, society and adolescents in Sri Lanka. The results of the focus group study are set out in Chapter 4.

3.5 Cross-sectional survey of the perception of adolescents alcohol issues and parental engagement in Sri Lanka

3.5.1 Introduction

The general population of interest for this research, including for the cross-sectional survey, was urban school students aged 15-18 years of age in four school districts in Sri Lanka: Colombo, Gampaha, Kandy, and Rathnapura. The aim of this part of the research was to survey the perceptions of urban adolescents (aged 15-18 years, of both sexes) about their own behaviour,

the role of parental engagement styles, peers, and the social environment in relation to the early consumption of alcohol. In this research, 'early consumption' is defined as alcohol consumption by a person younger than 21 years of age, as 21 years is the legal purchasing age for alcoholic beverages in Sri Lanka.

3.5.2 Research questions

The objectives of this survey were as follows:

1. Measure perceived parental engagement with their adolescent children
2. Measure the attitudes of adolescents towards early consumption of alcohol
3. Test the association between parental engagement and attitudes of adolescents towards early consumption of alcohol

All three objectives were met through the cross-sectional survey of adolescents in Sri Lanka.

Measurement of the perceived parental engagement with their adolescent children

From a review of the literature, measures were selected that reflect the different styles by which parents mostly engage with their adolescent children: monitoring, controlling and communication.

Parental Monitoring: this was assessed using the Parental Monitoring scale used by Stattin and Kerr (2000) which has been shown to have good reliability of $\alpha = 0.86$.

Parental control: this was assessed using the Parental Control scale used by Fletcher et al. (2004), which has been shown to have the reliability of $\alpha = 0.67$.

Parental Communication: this was assessed here by using items from J. R. Boyle and B. O. Boekeloo (2009) modification of Turrisi et al. (2000) Alcohol Based Parent-Teen Communication Scale. The modified scale based on J. R. Boyle and B. O. Boekeloo (2009) has a reported Cronbach $\alpha = 0.97$

3.5.3 Development of the instrument

The researcher developed a survey questionnaire drawing on instruments identified in the literature and the findings of the focus group study, which ensured that the questionnaire was relevant to Sri Lanka. There were three main sections in the questionnaire: first a descriptive section that contained six questions regarding adolescents' social and demographic characteristics. The second section represented the "adolescent and family" with sixteen question about parental communication, parental monitoring, parental controlling and parents' behaviour in relation to alcohol use. A third section, "adolescents and alcohol in society" comprised eighteen questions.

In the first section: adolescents' social and demographic characteristics contained six questions: adolescents' gender, age, number of siblings in the family, birth position in the family, father's education level and mother's education level. The researcher added parent's education level as a proxy for socio-economic status to examine any particular relationship between adolescents' alcohol initiation and social status.

A five-point Likert scale ranging from one (strongly disagree) to five (strongly agree) was used to examine adolescents' views in sections 2 and 3 of the questionnaire. The second section included questions regarding adolescents and their family. This section included questions related to the specific parental engagement styles (parental controlling, monitoring and communication) in relation to adolescent alcohol use. Further, the researcher added some questions to examine adolescents' intention to initiate alcohol in relation to parents' alcohol behaviour and parents' views on adolescent alcohol consumption.

The third section addressed the adolescent and alcohol in society. The researcher included 18 questions about adolescent drinking, parental views on underage drinking, peer influence, how adolescents access alcohol, general alcohol behaviour, understanding female drinking, adolescents' ideas for future solutions to reduce adolescent alcohol use, who influences young people's drinking and why young people drink alcohol.

Questionnaire items developed on the basis of the literature review.

Selected items were chosen to represent parental engagement:

- *Parental Monitoring*: this was assessed using the Parental Monitoring scale used by Stattin and Kerr (2000) which has been shown to have good reliability of $\alpha = 0.86$.

  I. My mother knows who my friends are.

  II. My father knows who my friends are.

  III. My mother knows how I spend my pocket money

  IV. My father knows how I spend my pocket money

- *Parental control:* this was assessed using the Parental Control scale used by Fletcher et al. (2004), which has been shown to have reliability of $\alpha = 0.67$.

  I. My mother decides which friends I spend time with

  II. My father decides which friends I spend time with

  III. My mother decides how I spend my pocket money

  IV. My father decides how I spend my pocket money

- . *Parental Communication:* this was assessed by using items from Boyle and Boekeloo (2009) modification of Turrisi et al. (2000) Alcohol Based Parent-Teen Communication Scale. The modified scale based on Boyle and Boekeloo (2009) has a reported Cronbach $\alpha = 0.97$.

  I. My mother and I discuss the media portrayal of alcohol freely

  II. My father and I discuss the media portrayal of alcohol freely

  III. My mother and I are interested in each others' opinion regarding alcohol use

  IV. My father and I are interested in each others' opinion regarding alcohol use

- *Parents' behaviour*: this was assessed using the scale used by, Hoque and Ghuman (2012) which was pre-tested for its appropriateness to measure parents behaviour regarding adolescents' alcohol use and a pilot study was done to refine the questionnaire.

    I. My mother drinks alcohol

    II. My father drinks alcohol

    III. My mother is against adolescent alcohol drinking

    IV. My father is against adolescent alcohol drinking

    V. My parents/caregivers have talked with me about underage drinking in society

    VI. My parents/caregivers permit me to drink alcohol at home

- *Peer influence*: this was assessed using the peer influence item used by Nash, McQueen, & Bray (2005). This item was used to identify the relationship between peer influence and the adolescents' alcohol attitudes and use.

    I. My friends invite me to drink

- In part 2, question number 3, adopted from Pettersson, Linden-Bostrom, and Eriksson (2009), was used in this study to assess adolescent views on an acceptable age for alcohol initiation This variable was based on the minimum age limit (21 years) for purchasing alcohol in Sri Lanka.

    I. I think it is OK to drink when under 21 years of age.

Questionnaire items developed on the basis of Focus Group Interviews

- Adolescents' views on young people's alcohol use

  I. I have drunk alcohol myself

  II. I have seen other people under 21 years of age drink alcohol

- Adolescents and Society

  I. People my age can easily buy alcohol from legal sources

  II. People my age can find illegal places to buy alcohol

  III. There have been negative incidents of alcohol use among friends and neighbours

  IV. There have been negative incidents from alcohol use among family members

  V. I have seen a female drinking alcohol

- Places where adolescents access alcohol.

  I. People under the age of 21 can obtain alcohol from their parents' home.

  II. People under the age of 21 can obtain alcohol from legal places.

  III. People under the age of 21 can obtain alcohol from friends

  IV. People under the age of 21 can obtain alcohol from neighbours

  V. People under the age of 21 can obtain alcohol from illegal places

- Adults' alcohol behaviour in Sri Lanka. Participants were given following response categories to identify behaviours associated with adults' alcohol consumption in Sri Lanka.

  I. Fighting with others

  II. Disturbing neighbours

III. Walking unsteadily

IV. Ruining their family members' lives

V. Living happily with the family and neighbours

- Four choices were given to respond regarding the factors contributing to the problem of young people drinking

I. Weak Government regulations

II. Advertising of alcohol

III. Permissive attitudes in society

IV. Poor law enforcement agencies

- Who influences on the decision of young people to drink.

I. Friends

II. Parents

III. Other family members

IV. Neighbours

- Reasons for young people's alcohol drinking

I. Having fun

II. Feeling sad and depressed

III. Feel better about themselves

IV. Wish to rebel

V. Fit in with friends

VI. Find solutions to problems

3.5.4 Translation of the instrument

The English version of the questionnaire is shown in Appendix N. The questionnaire was translated from English into Sinhalese by a professional translator and then back from Sinhalese to English by a different professional writer. The English versions of the instrument were then compared by the first translator.

The two English versions of the questionnaire were also compared by a staff member of Healthy Lanka and the researcher. In the Sinhalese version the word used for adolescents, "Tharuna tharuniyan" was changed to "Yauwana yauwaniyan" since the backward translation of English version used the term "young adult". The correct word for adolescents in Sinhala is "Yauwana yauwaniyan", so this was used in the Sinhalese version and the questionnaire translation completed.

3.5.5 Validation of the Instrument

Face Validity

Face validity was assessed in a "pilot test" which was conducted as follows. The instrument was given to ten people in Sri Lanka. The Sinhalese version of the questionnaire was provided to this group of respondents. The respondents did not belong to the same cohort that was studied but were similar in age and gender, so they were between 15-18 years of age and attended school. These students reviewed the final version of the questionnaire and provided suggestions to improve the clarity of the questions and their appropriateness to adolescents. In this way, using the pilot-test, the actual wording of the questions and the time needed for completing the questionnaire were confirmed. By conducting the face validity it was possible to confirm that the questions reflected the information to be sought from the students.

Content Validity

Content validity was assessed using the expertise at Healthy Lanka. The instrument, revised following the face validity test, was provided to two experts at Healthy Lanka, and they independently reviewed the items of the questionnaire. These experts had practical knowledge of adolescents and in Sri Lanka. They were asked to provide feedback on how well each item measured the Sri Lankan adolescents' alcohol attitudes and use, parental engagement and other social factors. Following their review, some revisions were made to ensure that the questionnaire was culturally appropriate for use with adolescents in Sri Lanka.

Construct Validity

Construct validity was assessed using a confirmatory factor analysis (CFA). In the CFA model, it was noted which items loaded on which factors. The three (latent variable) factors were used:

- Latent Variable 1: Parental Monitoring
- Latent Variable 2: Parental communication
- Latent Variable 3: Parental controlling

The CFA procedure is described in section 3.5.10 (Data Analysis).

3.5.6 Sampling strategy

As discussed earlier, urban adolescents aged 15-18 years were the general population of interest. This is a significant proportion of the overall population and the actual numbers of students in the four designated school districts are 241,350 (Table 3.3). Multiple sources were used to compile this number and it is possible that not all these adolescents are necessarily at school and definitely not all are in urban locations. The population is extremely culturally diverse.

Table 3.4 The number of estimated school students 15 – 18 years old in each district

District	Students 15–18 yrs
Colombo	92,344
Gampaha	57,986
Kandy	55,487
Rathnapura	35,533
Total	241, 350

To ensure a more homogeneous target population it was decided to confine the study to:

- students aged 15-18
- students attending urban government schools in the four designated districts

The sample of adolescents was drawn from government national schools in four districts: Colombo, Rathnepura, Kandy and Gampaha, the same districts used in the focus group study. As shown in Figure 3.3, the sample size was calculated using population survey approach in OpenEpi (http://www.openepi.com/SampleSize/SSPropor.htm). The confidence level was set at 95% for the calculation.

Sample Size for Frequency in a Population

Population size(for finite population correction factor or fpc)(*N*):	1000000
Hypothesized % frequency of outcome factor in the population (*p*):	20%+/-5
Confidence limits as % of 100(absolute +/- %)(*d*):	5%
Design effect (for cluster surveys-*DEFF*):	1

Sample Size(*n*) for Various Confidence Levels

ConfidenceLevel(%)	Sample Size
95%	246
80%	106
90%	174
97%	302
99%	425
99.9%	693
99.99%	969

Equation

Sample size $n = [DEFF*Np(1-p)]/ [(d^2/Z^2_{1-\alpha/2}*(N-1)+p*(1-p)]$

Results from OpenEpi, Version 3, open source calculator--SSPropor
Print from the browser with ctrl-P
or select text to copy and paste to other programs.

Figure 3.3 Sample Size Estimation for the Survey, source http://www.openepi.com/SampleSize/SSPropor.htm

Additionally, the sample size was increased by 20% in order to compensate for non-responses. The calculated sample size was 500 and an attrition rate 20 percent was assumed. A sample size of 600 was planned.

Six schools were selected by a proportional random sampling of government urban schools in four school districts. Ethical approval was obtained from the Ministry of Education in Sri Lanka for the survey. According to the ethics approval, neither individual schools nor districts can be identified in the questionnaire or anywhere in the research. Schools are identified by letters A-F.

In this study, eligible adolescents from the sampled schools included both boys and girls in Years 9-12. The sampled schools and eligible population from those schools are set in Table 3.5

3.5.7 Ethics Approval

Ethical approval was received from the University of Canterbury Human Ethics Committee; approval number is 2015/138. Permission was granted by the Sri Lankan Ministry of Education and the principals from the sampled schools to select eligible participants for the research. See Appendix H for the approval letters.

3.5.8 Administration of the Instrument

Two experienced researchers from the Healthy Lanka research team acted as research assistants for data collection. Both signed a confidentiality agreement with the project. Rigour in recruitment and the quality of data collected were ensured by the researcher providing information and detailed guidance to the research assistants. The researcher provided a written manual on confidentiality, proper procedure and the importance of the research assistant role and their responsibility for the survey. In line with the researcher's advice, the designated research team arranged the procedure for recruitment. The researcher maintained contact using internet facilities to make sure the survey procedures were applied in recruitment and data collection by Healthy Lanka staff members. The research assistants attended each school on two days: the recruitment day and the survey completion day.

First, the research assistants sent a letter (Appendix M) to the principals of the six sampled schools detailing the research, what was expected from participants and the survey procedure. Then the research assistants made phone calls to the principals of the schools to make sure that the principals had received the letter. When the research assistants had confirmed that principals were aware of the research, they provided more details verbally about the research. During this first telephone conversation research assistants again briefed principals on the purpose of the study, the expectation of the students' participation, issues of confidentiality and the procedure of the survey. Importantly, the research team reiterated the permission of the Ministry of Education and the need for permission from the parents of students.

Following this initial conversation, research assistants had face-to-face discussions with principals in the schools to arrange the two research days and a designated place to conduct the research. After the meeting principals used a school assembly to inform the school about the research, the dates and procedures.

First research day

The research assistants delivered the recruitment package (parents consent form, an information sheet for parents and students and the assent form for student with a return envelope) to the students. The information sheets, consent forms and assent forms had been developed in English and then translated into Sinhalese by the researcher. They were back-translated by an independent person to ensure accuracy. Students had two weeks to bring the signed papers back to school. Those who brought the signed parent consent form and student assent forms put them in a box in their class-room and class teachers put them in a box in the principal's room. A total of 5881students had the opportunity to pick the recruitment package, with 1065 doing so. A total of 629 consents/assents were received (Table 3.4).

Second research day

Two weeks after the recruitment day, the research team conducted the survey. Students who had the appropriate papers (the parent's signed consent and student's signed assent) were eligible to complete the questionnaire. A poster was put up at a prominent place in the school to inform students where and when they should go to complete the questionnaire. Eligible participants completed the questionnaire under the supervision of the research assistants. There was a box in the designated room where they could place their completed questionnaire. This research was conducted during the term tests, therefore, schools with a large number of eligible students showed a low participation rate and the schools with a small number of eligible students showed a higher participation rate. There were 549 completed questionnaires across the six schools (table 3.4).

Table 3. 5 The total sample size in the cross-sectional survey

School	Eligible students	Recruitment Package Picked	Consent and Assent	Completed questionnaires
A	1583	216	131	101
B	539	132	72	63
C	714	158	93	87
D	1524	221	118	107
E	428	135	86	70
F	1093	203	129	121
Total	5881	1065	629	549

3.5.9 Cleaning and Pre-processing of the Data

Before transferring the data to R studio (https://www.r-project.org/) for analysis, data were coded and cleaned. Number codes were used for categorical and ordinal variables (Appendix O). For the variable 'gender' male=1 and female=2. Participant ages were 15 to 18 years of age so age was coded as 15, 16, 17 and 18. There were six answer choices for the siblings' variable as none, one, two, three, four and more than four and these were coded as 0, 1, 2, 3, 4 and 5 respectively. Birth order of the respondent in the family also included 5 choices as one, two, three, four and more than four, and these were coded as the birth position order: 1, 2, 3, 4, and 5. The two

variables regarding educational achievement of the father and mother of the respondent as reported by the respondent included 8 answer choices and coded as follows: did not complete school - 0, ordinary level - 1 , advanced level -2, diploma or certificate - 3, vocational and training - 4, degree - 5, other - 6 and don't know - 9.All other variables used six levels scale as

follows: strongly agree, agree, neither agree nor disagree, disagree, strongly disagree and not applicable. These choices were coded as 1, 2, 3, 4, 5, and 6 respectively.

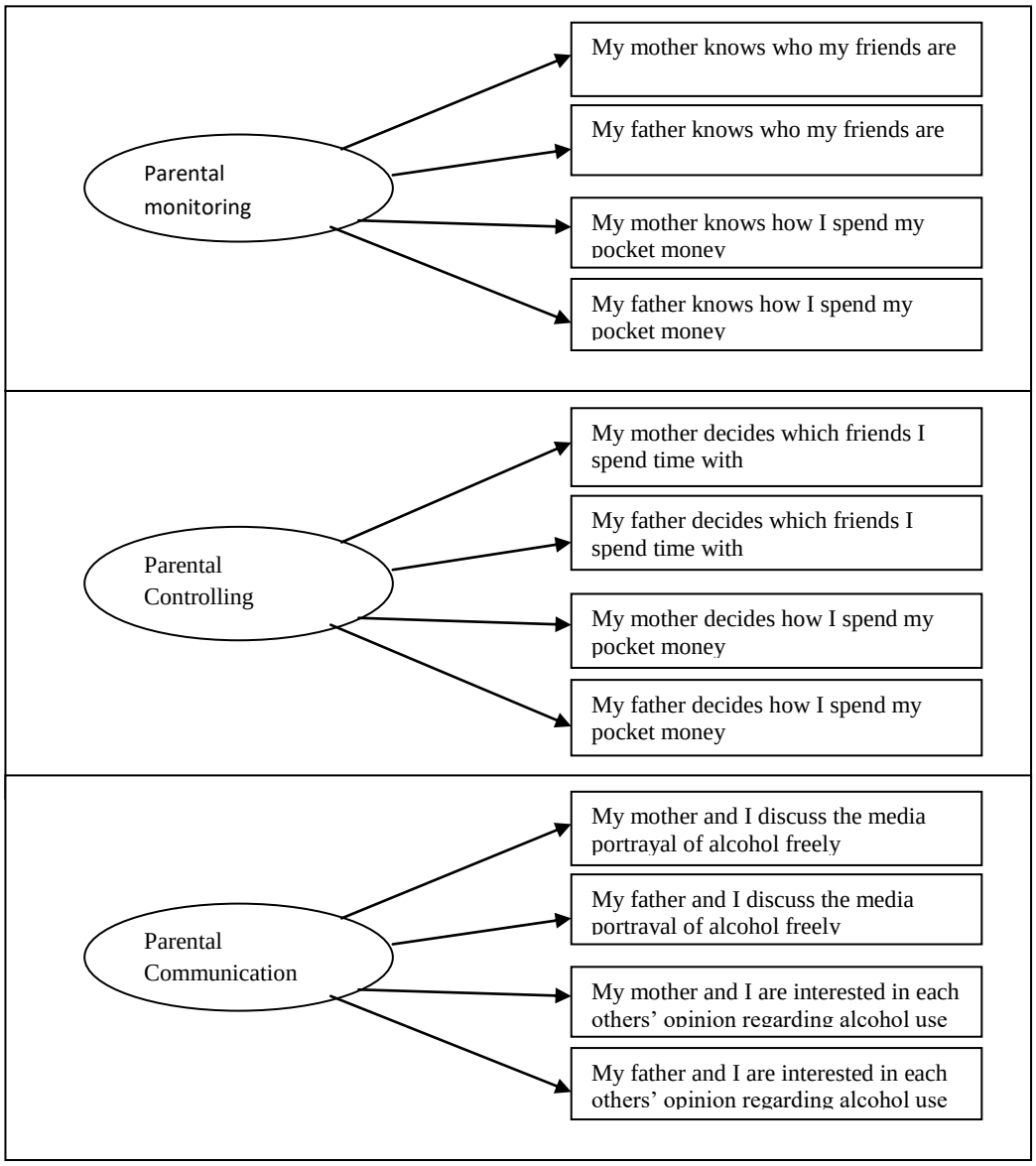

Figure 3.4 Conceptual diagram of Confirmatory factor analysis for Parental Monitoring, Controlling and Communication

3.5.10 Data Analysis

It is theorised that parents with different parenting styles engage differently with their adolescent children. Those different styles of engagement with their children lead to variation in the way the children approach or perceive or have attitudes to early consumption of alcohol.

Different kinds of scale of measurements require different statistical tests to generate valid results of the research. There are four kinds of scale measurements: nominal, ordinal, interval and ratio. Nominal: categories but no order, for example, sex (male/female) and marital status (single/married/divorced and widowed). Ordinal: data in which an ordering or ranking of responses is possible but no measure of distance between then is possible (strongly agree/ agree/ neutral/ disagree and strongly disagree). These scales range from a group of categories from least to most, high to low and best to worst using five or seven levels. Interval: generally integer data in which ordering and distance measurement are possible such as year and weight. Ratio: Data in which meaningful ordering distance, decimal and fractions between variables are possible (Allen & Seaman, 2007; McCrum-Gardner, 2008).

Questions on parental engagement sought data that could be ordered in Likert Scale format. As it is not possible to measure the distance between response categories the variables, therefore, were considered ordinal. Confirmatory factor analysis is a procedure which helps to establish the measurement model. In confirmatory factor analysis, specified latent variables analysed on manifest variables. In this case, parental engagement variables are latent variables and the observed variables from the questionnaire administered to the students were manifest variables. The squared standardised factor loadings were equivalent to the correlation between the latent and the manifest variables. Confirmatory factor analysis consists of collecting data in order to confirm that a construct is defined according to the theoretical approach the researcher used at a starting point (de los Ángeles Morata-Ramírez & Holgado-Tello, 2013). Therefore Confirmatory Factor Analysis (CFA) was done to evaluate the factor structure of the questionnaire with the following latent and manifest variables:

Fig. 3.4 sets out the description of parental monitoring, controlling and communication variables entered into the confirmatory factor analysis. The confirmatory factor analyses for parental

controlling and parental communication were identically conducted; hence these are not described here.

Confirmatory factor analyses were conducted for parental monitoring, parental controlling, and parental communication. For Parental Monitoring, the four questions used were: "Does your mother know your friends", "Does your father know your friends", "Does your mother know how you spend your pocket money", and "Does your father know how you spend your pocket money". These four questions were selected on the basis of the literature review and on the basis of focus group interviews to indicate Parental Monitoring as a latent variable. A latent variable is a variable that is unobserved and the four questions were referred to as "manifest variables" as indicators for parental monitoring. These four variables were also coded in the form of Likert scale questions and therefore, that is, ordinal variables, with values ranging between 1 to 6 where 1 = Strongly Agree, 2 = Agree, 3 = Neutral, 4 = Disagree, 5 = Strongly Disagree, 6 = Not Applicable (which indicated that this question was irrelevant for the respondent). All responses that had 6 as the response were removed from CFA so that the respondent values ranged between 1 and 5 for every question.

For each of the four questions per latent variable, the CFA produced an eigenvalue that was used to explain the variability of the items by the latent variable. In this case, for each of the questions, the latent variable "Parental monitoring" explained a specific percentage of each of the manifest variables (indicated by the individual questions).

R software "factanal" function was used to estimate the coefficients. This study used polychoric correlation matrix to understand the relationship between variables. When factor analysing is used to test the construct validity of a measurement instrument, it is important to consider the measurement scale used in the research. The polychoric correlation matrix was used as parental engagement variables were coded in ordinal scale. Although the polychoric correlation matrix does not elicit the discrete distribution in the observed items, regardless of sample size and a number of factors, polychoric correlation is the most consistent and robust estimator (Holgado–Tello, Chacón–Moscoso, Barbero–García, & Vila–Abad, 2010).

The results of the Polychoric correlation matrix are shown in Table 5.1.

3.6 Conclusion

To achieve the aims of the study sequential exploratory design was considered most appropriate to identify key issues and to develop an appropriate questionnaire for this little researched population. The design included focus group discussions followed by a cross-sectional survey of adolescents. The following chapters describe the results of the focus group investigation (Chapter 4) and the cross-sectional survey (Chapter 5).

Chapter 4 Focus group discussions with Sri Lankan Adolescents

4.1 Introduction

This was the first phase of the study, the purpose of which was to understand Sri Lankan adolescents' behaviour and response to alcohol related questions. Since there have been few studies of Sri Lankan adolescents, focus groups discussions were designed, as discussed in Chapter 3, to assist in the development of a culturally appropriate questionnaire for the second phase of this research and provide general insights into adolescents and alcohol.

There is a tradition in presenting qualitative research results to discuss similar or contrary findings from the literature alongside the results. This is not done exhaustively here as findings will be discussed fully in Chapter 6. There is, however, a selection of references to other studies to aid interpretation and provide context for the results.

4.2 Results

4.2.1 Introduction

The initial analysis of the focus group interviews identified 15 categories. These included pre-determined categories and also some emergent categories. From the initial 15 categories, three main categories were identified. They are:

1. Alcohol and adolescents
2. Adolescent-parent relationship in relation to alcohol
3. Alcohol and society

Once the three main categories were determined, the 15 categories could be allocated to them and identified as sub-categories. The three main categories and their sub-categories are shown below,

1. Alcohol and adolescents
    i. Adolescent motivation to drink alcohol
    ii. How adolescents access alcohol
    iii. Peer influence in adolescents alcohol use
    iv. Personal consequences of drinking and
    v. Solutions to reduce drinking by minors

2. Adolescent-parent relationship in relation to alcohol
    i. Family rules regarding alcohol use
    ii. Parental communication regarding adolescent alcohol use
    iii. Parental monitoring regarding adolescent alcohol use
    iv. Parental controlling regarding adolescent alcohol use
    v. Influence of parental alcohol use
    vi. Parental knowledge about adolescent alcohol use
    vii. Parents on selection of friends

3. Alcohol and society
    i. Alcohol use and gender difference
    ii. Adult alcohol behaviour in Sri Lanka
    iii. Legal age limit and adolescent alcohol use
    iv. Media influence on adolescents

4.2.2 Alcohol and adolescents

This first main category outlines the alcohol situation from the point of view of adolescents, why they are motivated to drink, and how they gain access to alcohol. Before the interviews, it was uncertain how forthcoming adolescents would be about their alcohol consumption. Research had been conducted in western countries on adolescents' perspectives in relation to alcohol use (Fraga et al., 2011; Parvizy et al., 2005; Rodham et al., 2006), but there had been no comprehensive qualitative study in Sri Lanka. An exploration of adolescents' own views on their

alcohol use, however, is important for a better understanding of the issues. From the analysis of the four focus group interviews, four sub-categories were identified in first main category, **Alcohol and adolescents.** These are adolescents' motivation to drink alcohol; how adolescents access alcohol; peer influence in adolescents' alcohol use; and adolescent views of drinking. The following sections explore these four sub-categories.

Adolescents' motivation to drink alcohol

Adolescents expressed their ideas about the motivation for alcohol use in a number of ways. The question 'Do you recommend drinking alcohol at your age?' was explained by the interviewer as meaning between the ages of 13 to 18 year old. In all focus groups, all participants replied 'no no'. At this point, it appeared that participants were not fully open to engaging in discussion. However, after this question, they started to describe their views more openly.

'Why do adolescents use alcohol?' was a question used to gain information about adolescents' motivations. Answers were very interesting and throughout the interviews, there were many examples of this. There are different motivations: happiness, sadness, because of adolescence, to reduce pressure, and peer pressure.

When participants explained the reasons for drinking, they gave many different reasons. One boy said "Hema magulatama bonawa kiyala thamai mama ahala thiyenne", meaning 'I have heard that people drink for many reasons.' Some examples follow:

- *There isn't a one reason. Some find reasons to drink. When they have a problem with a girl friend some drink. A girl left me and I had a break, so drink. Then, after that, say, I met a girl so I drink. There are various situations and various reasons to drink.*
- *When they go to Nuwara Eliya they drink because it's cold. Drink beer for cold. Same way, when they go on a trip to Monaragala also, gone to Hambanthota and drink arrack….. They drink for cold weather and hot, so drink they say. There are different kinds of reasons* (NB Nuwara Eliya is the coldest area in Sri Lanka and Monaragala is one of the hottest areas in the country).
- *When there is happiness, they drink. For a sad situation, they also drink.*

Another reason they gave for drinking was their age, adolescence. The following description shows how they explained the drinking motivation because of their age. They know that adolescence is the time to experiment and try to do something society may not like. Their ideas are consistent with the literature on adolescence. Coleman and Coleman (2002) and Steinberg and Morris (2001) demonstrated that during adolescence a new balance must be found to accommodate young people's need for increased autonomy and changing cognitive and physical capabilities. Because of that, for young people, the developing period of adolescence incorporates changes across multiple domains, including individual thinking and social transition. The following quotes support this idea.

- *When young people go outside the school, they make it a habit to drink. I think because they want to do something different. Something, which the society says not to do. Like, they want to have fun doing something new. Something that they want to do.*
- *I think that they like to drink because it shows their independence. There are some who drink because of that. I can drink now. I think there are some like that.*
- *That is the because of their age*

Important research was conducted to understand the motivations for alcohol use among men aged 16 to 30 years in Sri Lanka. In this, the researchers identified **a** number of domains of drinking motives (Perera & Torabi, 2009). Perera and Torabi (2009) identified three factors; social pressure, tension reduction and personal enjoyment that motivate 16 to 30 year old males in Sri Lanka. They identified 20 items and compiled 20 items into three factors. Tension reduction was found to be an important motivation for these young men.

Before collecting data, it was anticipated that adolescents' perceptions might be similar to those found by Perera and Torabi (2009). Although the methods used and participants were different it is possible to 'map' sample quotes from the focus group interviews against the items used and factors identified by Perera and Torabi (2009). The following table shows the relationship between this study and Perera and Torabi (2009).

Table 4. 1 Comparison of the focus group findings and Perera and Torabi (2009) categories of motivations to drink by young people

Factors and items (Perera & Torabi, 2009)	**Quotes from focus groups**
Social Pressure my friends drink it is difficult to refuse other people are drinking it will enhance my creative ability it is customary for men on special occasions I want to be prominent	• *When we go on trips* • *Some people say today we have a party so they mean we can drink* • *When they see others drink, they drink too for fun* • *They think they are in a higher level than us because they have drunk alcohol. Other time they are silent. They think we can't do what they have done. So they try to show us their power*
Personal enjoyment I like the taste It makes me feel good I get thirsty It goes well with meals	• *They think that they can have happiness* • *To have fun they do that. "Athal ekkak ganna"* • *They drink to get drunk, they have the purpose of drunkenness. That is why they use alcohol* • *When they are drunk they say it is very good. That is why they use alcohol. They there is something really (amuthu mekak thiyanawalu)* • *They drink as their hobby.* • *Some it's for (Joliyata) happiness (one boy repeated another boy's idea) PE*

Tension reduction It helps me to relax It would ease me when I get blame It helps me to sleep It helps me to forget my worries It helps me to get rid of restlessness and taste It helps me to cheer up when I get dull boring It gives me energy It is a habit It helps me to face difficulties with confidence It helps me to control others	• *When they have, some kind of pressure in their mind. To get rid of that pressure they use alcohol* • *In the present, when they break up a girl/boy relationship (they laughed) then the boy, especially boy, most of the time boys turn to alcohol. It means they get rid of the sadness* • *When somebody has a breakup of an affair.* • *Some drink for their sadness* • *When they drink they think they have more power, they think so. ("Anith ayata chandi part danna"). So they drink to show others their power* • *Why there are some, they drink for the anger. They tell that they drink because of their anger. To get the anger down*

How adolescents access alcohol

One of the purposes of the NATA was to discourage children and young people from consuming alcohol. In order to do this, the NATA increased the age of purchasing alcoholic beverages to 21 years. As noted in Chapter 1, Sri Lankan adolescents are thought to access alcohol easily, though it is illegal to sell alcohol to those under 21 years. Regulatory policies, as already noted in Chapter 1, are ineffective in a country like Sri Lanka where bribery and corruption are associated with the liquor industry (Hettige & Paranagama, 2005).

Adolescents expressed views very freely on how young people can access alcohol and how the sellers can escape from any police or legal action. They were aware of two types of sources of alcohol for purchase: licensed sellers who sell alcohol illegally to minors and unlicensed places where alcohol was sold illegally, without a license. According to respondents from across all four focus groups, bars and supermarkets are legal sellers where they can sometimes access alcohol.

With respect to illicit alcohol consumption, the adolescents explained the current situation in the country. Their comments supported indications from Sri Lanka that there is high unrecorded alcohol consumption from illicit sources, with alcohol consumption maybe double official levels if illicit liquor is taken into account (Hettige & Paranagama, 2005). It was clearly explained by participants that houses in villages and forests, some stores and paddy fields are some of the places where people their age can buy alcohol. They also reported that some illegal sellers sell alcohol close to schools. The following quotes describe the illegal places where adolescents can access alcohol:

- *There some places in the village. They sell alcohol illegally. So they can get from those places.*
- *There some places in the forest.*
- *There are some people. They bring alcohol near to the school. They sell it to children.*
- *Some stores sell arrack. They show people that they sell other things but inside the store they have alcohol to sell. People know that they have alcohol.*
- *They sell in the paddy field*
- *Inside villages, there is "Kassipu"*

Some places with a license to sell alcohol also sell illegally to those under 21 years of age. It was interesting to realise that they can also buy alcohol from legal places. Participants said that adolescents get adult help to buy alcohol from legal places and for the help children pay them extra money. There are some licensed places that directly sell alcohol to minors but easily escape from police sanctions. Sellers normally have an idea when police are likely to investigate and

appear to have little concern about law enforcement. The following quotes explain how people their age access alcohol:

- *This is the way. The people who sell arrack know when the police come. I think so. Because he is afraid. He gives the children a particular time to come. He knows when the police come around.*
- *Children can't get alcohol from some places. But they ask older people to get arrack. There are some who do that.*

Peer influence on adolescents alcohol use

It is important to note that participants' information supported the findings from the literature on the importance of peer influence on adolescents' motivations to drink. Most participants in the four interviews described the relationship between friends and adolescents' drinking motivation. Previous research has examined this relationship. The study conducted by Nash et al. (2005) reported that as adolescents begin to spend less time with parents, the more the source of influence shifted from parents to peers. This idea is consistent with focus groups reporting, where participants talked about the influence of their friends. It is possible that not all responses are from their own experiences, but that they had observed this among others.

Most participants indicated that their age group uses alcohol for fun, to fit in with their friends, and to deal with sadness and stress. Some explained that it was mostly to fit in with their friends. They explained clearly how friends introduce alcohol to others; in a group setting if somebody refuses alcohol, they are likely to feel isolated within the group, and so everybody tends to participate in drinking.

The following quotations show how friends influence adolescents' drinking:

- *When friends gather for some reason, it's something they do together.*
- *If there is a one person who uses alcohol, others like to imitate that. It means..., it, it has become fashionable to do this. ….People think it is good to imitate that'.*
- *I have heard it's to gain friends. To gather with friends, they drink for that."*
- *If there are ten friends, we think out of ten friends eight will drink. There are two watching it. They may have a wish to drink and seeing others gives them the*

chance to drink anyhow. Most of the time it just happens, friends do not force them to drink.

- *Because of bad friends (Naraka mithuru asura). It means, in this age group, younger children associate older friends. When their friends drink. They learn from their friends.*
- *Just like for fun. When they go with friends they get used to drinking. They think when they have alcohol it looks good. So when they are with friends they drink.*
- *Some drink because of their friends' pressure. When they have friends who drink, they have to drink.*
- *Friends who use alcohol tell them, alcohol is good but they don't know that feeling. So they want to have the experience. So they drink and have the feeling. They want to see what happens after drinking.*
- *Most of the time they like to drink with their friends for fun. When they meet they all like to drink. When their friends drink, every boy does it too.*

Re-reading the interview data, it is clear that participants saw the peer group as a major training ground for risky behaviour and alcohol use. Also, adolescents revealed that peers are thought to supply the adolescents with the attitudes, motivations, and rationalisation to support drinking alcohol.

Personal consequences of drinking

At the end of the focus group interview, the interviewer asked participants to express their views about drinking, or anything else from the discussion. From the transcripts, it is clear that it was a very important part of the interview since the adolescents spoke directly and freely. Some of the main ideas they spoke of were the negative and some the positive consequences of alcohol.

Fraga et al. (2011) in qualitative interviews with 13 year olds in Portugal found that participants identified three types of negative consequences of alcohol use: social and psychological consequences, physical consequences and risk-taking behaviour. There is a close relationship between the findings of the focus groups and the analysis of adolescents view on alcohol drinking by Fraga et al. (2011).

Throughout the focus groups, adolescents noted the negative psychological and physical consequences of alcohol consumption. The following quotations illustrate this:

- *Alcohol; arrack is a thing not good to use because it can cause problems in the body. There are different kinds of diseases. So I like to know the reason for their drinking.*
- *When they go on a trip, some say that people sit together and drink. We have seen this kind of behaviour when we were small (ethakota echchra mekak ne apita). We didn't have a good idea of what was happening then. At this stage, we know the effects. We understand what is good and bad. There isn't any good. Actually, people have the disease because of alcohol.*
- *I think alcohol is not good for any age groups. I think it is not a good thing for anybody's health.*

Reading through the interview data, it seems clear that most adolescents are aware of the negative consequences of alcohol consumption. From their comments, it is likely that some adolescents might have experienced these themselves, although they do not admit that they were their own experiences. When some boys' described first time drinking experiences it seemed as if they were talking about their own experiences:

- *Yes it is not good to drink because it causes diseases, first time drinking is horrible (ekaparatama bonakota)*
- *They started vomiting*

Some participants did not directly express the view that alcohol is not good for people but in various ways rejected the idea of alcohol and seemed to wish that it was not present in society. One girl said that she feels angry when she sees drunken people and another participant said that he would like to see a society without alcohol. Here are some comments related to this view:

- *If we can stop drinking alcohol as a necessary thing at parties it will be good. Because people think having alcohol is the main thing for a party.*
- *I feel angry when I see drunken people.*
- *If we can stop alcohol in society it is a good thing for everybody.*

- *We should tell them not to drink. If we can tell our friends it is good.*
- *If we can help children who are addicted to those things it is good. If we can get them onto a good path it will be good for all.*

Although, most of the participants realised that it is unnecessary to use alcohol, some described alcohol as a social benefit. The adolescents who made these comments have a positive view of drinking and they see drinking as acceptable as long as its use does not create any trouble in society. They mentioned that if people consume a limited amount of alcohol and are able to control themselves, then it is not a problem:

- *So, we can't say alcohol damages society. Lots of people say that after drinking they feel crazy. That is what happens. But there are drunken people who don't act crazy and they can walk without staggering. Some people stagger. We can see on the road. Some people can recognise their family or know their neighbour's name after drinking. How can we say that drinking affects their mind? So we can't say it damages the society.*
- *If they can control themselves drinking then there are no bad consequences to society.*
- *Lots of people reject drinking not only because it causes disease but also if neighbour make noises it is a problem for their children. Reasons like that. So, if they can control it, it doesn't matter.*

Solutions to adolescent drinking

There were a number of solutions proposed by participants to stop the adolescent use of alcohol in Sri Lanka. Despite the long discussion about corrupt law enforcement agencies, bribery and political influence, some participants said that having strong laws is a solution!

In the same way, other participants suggested that one solution would be to educate sellers to check for identification before selling to young people. However, some indicated that this was not enough and establishing a third party to check whether sellers or police do their job properly would be a good solution.

- *When they go to buy alcohol, if sellers check their ID, then people our age can't buy it. So there should be a way to check whether store-owners are following the law.*
- *.If the police do their job properly we can reduce drinking. So we have to give enough knowledge to the police for them to do the right thing to reduce our age group drinking*

However, participants recognised the importance of television and other media as a way to reduce adolescents' alcohol use. They agreed that advertisements influence adolescents by showing happiness, enjoyment and other positive scenes to get them to use alcohol, and some participants suggested that stopping advertising is a good way to reduce adolescents' alcohol use. They were not all aware that alcohol advertising is actually banned. Some participants explained how media can be used to show adolescents the negative effects of alcohol. Some suggested that people in their age group do not have a proper understanding of the negative effects of alcohol. The following quote illustrates how advertising the negative effects is thought to be a good solution to reduce adolescents' drinking.

- *We should promote the bad effects of alcohol use in our age group. Then everybody will know what that is and what happens if we drink alcohol*
- *I think there should be advertisements so that people can see the bad effects of alcohol, then maybe they will not find drinking so attractive. They see lots of people drink to be happy, at parties; they think it is for fun. But, I think they do not have ideas about what the negative aspects of alcohol are. If we can show them what happens when we drink alcohol, people will not want to be like that.*

4.3.3 Adolescent-parent relationship in relation to alcohol

This section reports on the ways parents engage with their children in relation to alcohol. Unexpectedly, all participants in all four focus groups were silent when the interviewer asked the question 'what are your family rules regarding alcohol use'. When the interviewer explained the

question to make participants aware what the expectation of the question, participants slowly started to express their ideas.

Parents may play a critical role in their children's introduction to alcohol. It was clear that parents engage using different parental strategies, to support the development and health of their adolescents (Gilligan & Kypri, 2012). During the interviews, participants described different ways in which they thought their parents tried to reduce or delay their alcohol use. From the focus group interviews, it was possible to determine what kind of styles or approaches parents used in relation to alcohol, and there were a number of actions parents took, as set out below.

Family rules regarding alcohol use

In the focus groups, there was a direct question regarding their family rules in relation to alcohol use. From the analysis of the data from the groups, it was clear that parental rules were rarely planned and agreed.

Most participants stated that they are subject to rules regarding alcohol. Some said that everybody in the family has the same rules and most of the time their mother wants all members to adhere to one rule. Few participants said that there were various rules in one family. Many of the boys had opinions regarding rules. One boy said that he cannot go home if he drinks alcohol and since his father drinks, other members of the family do not want their relatives to drink alcohol. There were different comments regarding family rules; some participants explained how in some families how mother makes food for their family when drinking occurs, others said that nobody drank in their families so they do not have special reasons to have any rules. Another boy explained that in his family only he has rules regarding drinking but his father does not.

- *I was asked not to drink. But our father doesn't have any rules* (He emphasised that with a sound*). We all have rules.* (Everybody laughed) *They say not to drink.*

In some families, drinking is allowed. Especially, the father can drink but the mother has some rules such as asking him not to vomit inside the house, not to make noise and not to fight with family members. When participants described the experiences in their own and neighbours' families, it appears that most of the adolescents had negative feelings towards adults drinking. Of

interest is how a girl described the common situation in some families; since the mother wants her adolescents to avoid alcohol she has rules only for them. The mother does not try to influence her husband's drinking because his drinking pattern is already well-established. The mother, though, feels that she has the responsibility to create a safe environment for her children and tries to ensure that the father does not make problems at home.

- *If a family has boys, if their father is a heavy drinker, then the lady in the family that means mother says you can drink but don't make any problem here. Because I am here with my children so the mother normally says that kind of thing. But that mother doesn't like her children to drink and learn it from the father. It means she doesn't want her children to be addicted. For that reason, mother tells them not to drink like your father. She says something like that. To the father, she says you can drink but don't fight here. It means may be she knows that she can't stop her husband from drinking. But, she tries to get her children on the correct path.*

There is an association between parental control and adolescents' alcohol use. Most of the time, parents use rules to control their children's alcohol drinking. Harris-McKoy and Cui (2012) and van der Vorst et al. (2007) showed that providing clear alcohol-specific rules can prevent initiation of alcohol consumption at a young age. Although participants do not report any specific parental rules, their descriptions reflected the association between parental control and rules since some participant said that adolescents do not drink alcohol in the presence of their parents. Participants understand that their age group cannot have alcohol when they go to parties with their parents. They said that there is some control on adolescents' alcohol use because most of the time adolescents go to parties or weddings with their parents. Another participant commented that there is some control on parents over adolescents buying alcohol from their local village since their parents would soon find out.

- *They can't get it from the village. Their parents also live in the same village. So they don't buy from places in the village. They don't want their parents to know that they drink alcohol. So they don't go to village places.*

Another participant explained how his grandmother controlled his uncles' drinking by giving them some rules. Participants said that his uncles had to come home before 6 pm and if they were late his grandmother went to look for them and checked whether they had been drinking. He said now she has the same rules for him and his brothers and that his parents agree with her. He explained the situation he has in the family:

- *I have my grandmother, she has eight children. Out of eight, four girls and four boys. The boys are now old. After completing school they started jobs. After that, some time ago, they had to come home before 6.00pm. If they were late, grandmother went to look for them and checked their breath to see whether they had been drinking. She tells us that she did that way. Then, some didn't drink alcohol before getting married. She tells us not to drink, she tells us all the time. Mother is the same. Father is the same too. It means they think that drinking is not a good thing to do.*

There were comments that some adolescents find ways to drink without control even when they are with their parents. One participant said that whether adolescents drink or not depends on the situation; if they have the opportunity, they will drink.

Parental communication regarding adolescent alcohol use

According to participants' comments, there are few conversations regarding alcohol among family members. Some participants recalled occasions when their parents talked with them about alcohol and alcohol related topics. The majority of participants initially said that they could not remember their parents discussing alcohol with them, but as the discussion progressed there was more recollection of conversations they had had with their parents about alcohol.

Most participants said that their parents communicated to them that alcohol is not a good thing for them and some mentioned that parents told them alcohol is not good for any age groups and not to drink. Parents talked about the negative consequences of alcohol consumption, including kidney problems, problems in education, how alcohol cause diseases, and how alcohol can create problems in their life. van der Vorst et al. (2010) noted that communication on the negative

consequences of alcohol is linked to lower levels of adolescent alcohol use. According to participants, the majority of parents have communicated with their adolescents about the negative consequences of alcohol.

- *They have told us that if we drink alcohol it causes kidney problems. They tell it is bad for everybody. In our house everybody has the same way and one idea about alcohol drinking. They say it is bad for all age groups.*
- *We didn't talk much about that. But they have told me what happens if we drink alcohol. They told me it will interfere with our studies. If we start to drink we can't stop. So they don't want us to use alcohol. We shouldn't start. I also think if we start we like to try it again and again.*
- *They told me, alcohol makes problems in the body. It means if somebody drinks regularly it causes diseases that can't be cured. I think they don't want us to have any health problems. My parents told me not to let alcohol into my life. It isn't necessary and they advised all of us not to use it.*

Some participants' parents told them not to start drinking because if somebody starts to drink it is a difficult thing to stop. Some parents have explained to their adolescents that if they make drinking a habit it may cause them to become isolated from society and nobody will respect them.

- *They asked me not to start drinking alcohol. They have told me that if we make a habit of drinking alcohol, it is not good for our life. They have explained the bad effect of alcohol drinking. Sometimes, they say bad things about others who drink. I think that is why they do not want us to use alcohol.*
- *[They say] don't drink arrack and smoke cigarettes. If we get those habits we can't get rid of them. So don't drink alcohol. They tell like that. And also they have told me, that it causes diseases. Like kidney problems. People don't respect people who drink; those are the things they have told me.*
- *They have asked not to use alcohol. They told me, when people drink alcohol they are isolated from society, because, people think it is a bad thing. So they don't like people who drink alcohol*

- *They told me drinking causes bad diseases. If we drink, people in society don't respect us. So they told me to make friends with people who don't use bad things. So if we want to have a good life they told me not to use alcohol.*

A few participants indicated that their parents had told them about the economic consequences of alcohol, such as the costs of purchasing it or the prospects of not being able to hold down a good job. The majority of participants commented that their parents communicate about alcohol with them when they hear of or see any incident in relation to alcohol, for example, if they saw a drunken man staggering and making noise near their house. If they heard of any fighting related to alcohol their parents talked about alcohol.

- *When we are walking on the road they saw a drunken person and told me about alcohol. That person was staggering and behaved a way that everybody looks. They told me that is what happens when somebody uses alcohol and told me not to drink.*

Sometimes if their parents knew that somebody had died from an alcohol related disease, they would discuss that matter and advise them not to drink. Parents tended to take the opportunity to describe the negative consequences of alcohol. The following comments provide evidence how parents respond to alcohol related incidents:

- *My parents have told me, alcohol causes diseases. Mostly they talk about bad effects. They told me that some people have swollen stomachs because of too much alcohol that it is a serious thing and people die because of that kind of stomach. One day told me one man died for that reason.*
- *They talked with me too about how some people died because of alcohol use. They suffered from cancer and died. There was an incident like that in our village and they told me about it. When people use alcohol they get diseases. So they told me alcohol is not good for the body.*

Also, a participant commented that his parents talked about drinking when parents hear about friends' drinking:

- *They hadn't talked about alcohol with me. But some of our friends used alcohol at school. When my parents got the news they talked about it. It means they talked to me about alcohol for that reason.*

Some commented that their mother normally talked about alcohol. But then another girl participant said that they do not talk about alcohol in their family because their mother does not like that topic to be discussed. But she said that nobody in her house uses alcohol. Mares et al. (2011) indicated that when mothers communicate with their children about alcohol, it lowers the level of adolescent alcohol related problems. Most of the participants in focus groups emphasised that mothers want their children to avoid alcohol and are likely to raise the topic regarding alcohol. These sentiments are reflected in the following comments:

- *But there are some places father can drink, but not the children. Mother doesn't want us to drink. Most of the time mothers talk about that. Some mothers are really aware of alcohol. Mothers think if father drink inside the house, then their children a may learn from that. So some mothers ask fathers not to drink at home.*
- *Mother knows about us. She is angry when people drink. My father drinks but she can't stop that. But sometimes father also tells us not to drink alcohol. I see what father does when he drinks. So I don't feel like drinking. She doesn't say anything to father, but always tell us not to drink.*
- *My father also drinks but nobody says anything about his drinking. Parents ask us not to come if we drink. And also she says that father drinks because he works hard.*
- *They have told us not to drink. We don't have special rules. But parents don't like their children to use alcohol. Our father drinks but mother doesn't argue with him. She doesn't say anything. But for us, she tells us not to use alcohol and get a habit.*

Parental monitoring regarding adolescents alcohol use

When parents make sure that they have knowledge about their adolescents, even when they are away from them, this is considered parental monitoring (Laird et al., 2003; Stattin & Kerr, 2000).

From participants, it was clear that parents do monitor their children. According to some participants, parents become aware of behaviour that they do not expect their adolescents to engage in. Some participants said that parents ask their friends about them and another indicated that poor grades at school are ways parents identify problems. The following comments show this:

- *Most of the time, if children get a low level of the grade at school, if they go out unnecessarily, and have more outside work. Then they guess that this guy is going to the wrong side.*
- *Parents can see their changes; they recognise their behaviour when they drink. Sometimes they hear about it from their friends. If they have a friend who drinks then they think others also drink.*

Most of the views expressed in focus group interviews are similar to the literature findings in Laird et al. (2003) and Stattin and Kerr (2000) who note that parents are usually aware of their children's whereabouts, activities and playmates.

Participants also explained other ways that parents can get knowledge about their activities. When parents heard about a friend's drinking, parents monitor their own adolescent's behaviour since their friend's drinking is an indication to them that they need to be aware of their own child. As a result of monitoring, parents can become knowledgeable about their adolescents in relation to alcohol or any other undesirable behaviour.

- *Sometimes, if somebody is having a cigarette or drinking, even if our parents don't see it, maybe another person has seen it tells our parents*
- *Like drinking, they ask our friends about it. Sometimes they get the information from friends. Sometimes when they hear about friends' drinking, they ask us. Did you do this? Did your friend do that? We heard that. Did your friend do such a*

thing? Did your friend drink? We heard that. They try to find out about our friend because they think their child may do the same. That is why they question us.

- *There are some children who gossip. From them parents get news. Some children are like that. If somebody knows that a friend has used alcohol then, they may tell their parents. The person who saw it may also tell others. Then parents question them*

Laird et al. (2003) suggested that parents be more pro-active as adolescents grow older. As they grow older their activities, interest, and playmates change and expand; they begin to spend more time outside of direct adult supervision, therefore, more active parental monitoring is required. In Sri Lanka, many children participate in extra tuition classes for almost all the subjects they study. A participant explained how their friends use tuition time to misbehave, using alcohol during that time, without their parents' knowledge.

- *Some children go to tuition classes. Those classes are normally conducted after school. Then some children cut these classes and go off with friends….. This is how they get involved with bad habits. Parents think they have gone to the classes. These classes are not like school, no-one takes attendance. So children do things like that.*

It seems that there are behavioural and physical changes that parents can use to recognise adolescent drinking. It was interesting to hear how adolescents themselves felt about behavioural and physical changes after drinking. When the interviewer asked 'how do your parents recognise drinking among people your age?' participants in all four focus groups interviews answered readily.

Dishion and McMahon (1998), however, indicated that parental monitoring may not be effective enough to recognise adolescents alcohol use. Parents may require new skills and information for this but participants clearly believed that parents could see physical changes such as red faces and eyes, untidy hair, bad breath, and walking unsteadily, and talking without thinking.

- *Yes, from their behaviour. When they talk they can tell they are drunk. They say unnecessary things and parents can understand that.*

Parents also find out about adolescent drinking from other people. Many participants in all four groups described how their friends, neighbours, and other people around them deliver gossip to their parents:

- *From other people, it means somebody who knows their parents tell them. So they don't drink when these people are around.*
- *Sometimes others deliver the news about his drinking. It means, if somebody sees another person's having alcohol then they tell their parents. Sometimes parents get the news that way.*
- *From older or younger brothers. When they go to the same school sometimes they come to know that their brother has used alcohol. It spreads around the school, and then everybody knows about it. If anybody in the family has used alcohol those children go home and tell their parents.*
- *Sometimes children who drink arrack tell their friend themselves. Then their friends tell their parents.*

Influence of parental alcohol use

According to participants their parents' attitudes and parents' own drinking may be associated with their approach to alcohol. Observing different parental behaviours and attitudes seemed to help adolescents form their own views on alcohol use. In most families, a father's drinking is acceptable, but the mother always tries to keep adolescents away from alcohol use. There were lots of comments about adolescents' first source of knowledge of alcohol being their family background, especially their fathers' drinking. Many participants talked about how mothers try to prevent adolescents seeing their fathers' drinking. A mother may very clearly tell her husband not to drink in presence of the children and she tells her adolescents that although their father drinks, she does not want them to do the same. She recognises that getting her husband away from alcohol may be impossible, but she wants to keep her children away from alcohol during adolescence.

- *If a family has boys, and if their father is a heavy drinker, then the lady in the family, the mother will tell him he can drink, but not to make any problems*

- *The mother doesn't like her children to drink and learn from their father. It means she doesn't want her children to be addicted…. It means maybe she knows that she can't help her husband to stop drinking. But she tries to get her children to the correct path.*

In some families, parents allow their young adults to drink but tell their younger adolescents to wait till they are old enough to drink legally. Those parents have positive attitudes to alcohol use and this may increase adolescents' drinking. A participant's description showed how some families accept alcohol consumption and how parental attitudes and behaviour influence the family.

- *It is like this. There are lots of families that don't worry about father's drinking. And also an older brother is now old enough to drink. They tell the younger boy, that he must wait until he is older to drink. There are some families who say that.*

Sometimes, although the father drinks alcohol, he does not want his adolescent children to use it. A few participants commented on how fathers try to keep their adolescents away from alcohol while they drink themselves.

- *If the father drinks, he also hopes that their son will not drink,*

In Sri Lankan culture, there are different sub-cultures that can be recognised in relation to alcohol. At some family events, men have separate places where they drink, and most of the time they keep away from other people as they do not want young people to see their alcohol use. Generally, the mothers do not allow their adolescents to join the drinkers. This may lead to curiosity on the part of adolescents, so if they have the opportunity to use alcohol, they will try it.

- *It means father and father's friends get together and drink. Father didn't tell me. Mother has told me and asked not to go there. If I do she thinks that I may start drinking. That's what she told me.*

It is important to understand the influence of parental behaviour on adolescents. Parents are the main source of knowledge for most adolescents, who may try to imitate them. Adolescents

described how they drink with their friends the same way their fathers drink. In this alcohol sub-culture, their parents are the role model for their life style.

- *Sometimes parents see them drinking. Sometimes if there isn't any problem drinking in presence of their parents, they drink with them. Some go to hidden places and drink without parents. Friends get together and drink.*

There is another recognised drinking culture called social drinking. In this culture parents allow their adolescents to drink alcohol and it is not rejected by their family. Only a few participants described social drinking since it is not an acceptable and common drinking behaviour in Sri Lanka. Particularly, participants themselves acknowledged that they have a different culture not typical of Sri Lanka but more similar to western culture. Their parents do not drink in secret and they have alcohol as a part of their meal.

- *Our family system is different; as the father drinks so do the son. My father uses alcohol but we don't have a culture of going to a separate place for four five people to have some food and then drink. We don't have such a system. If there is alcohol, we serve a glass at the table. This isn't big problem in our family. Having a glass wine in our family is normal, they even serve it for 10, 12 year olds too. It isn't a big issue. That is our family system.*

One boy clearly explained how his parents introduced alcohol beverages to him when he was small; his parents gave him some alcohol to taste and explained the different types of alcohol. He said that there was alcohol everywhere in his house, but he never wants to try it. Since he has had the chance to taste it and alcohol is a common subject in his family, he had no curiosity about it. As in other parts of the world, some parents seem to want their children to develop socially acceptable drinking patterns while still in their home (Bourdeau et al., 2012).

- *I know there are lots of families. They don't have any economic problems or problems in relationships. Though father drinks alcohol there isn't any influence on their sons. Though most of Sri Lankan think so, in westernised culture it is not like that. As I have seen alcohol in my house, I didn't have any need to try it. My parents have told me the name of some types of alcohol. Sometimes my father*

tries to give me his glass. Therefore I didn't want to try it without my parents' knowledge.

As Fraga et al. (2011) indicated when it is easy to access to alcohol parental knowledge about alcohol use by adolescents appears to protect them from drinking heavily. This finding from the literature is consistent with the social drinking described by these few participants in the focus group interviews.

Parents and the selection of friends

The majority of participants commented that their parents advise them to select their friends carefully and indicated the kinds of qualities parents would like to see in their friends. Most of the time adolescents try to associate with friends that their parents recommend. Only a few participants said that they choose friends without their parents being involved. Some adolescents said that though their parents advise them to associate with acceptable friends, it is not always easy to do that. Some participants said that they have friends who behave badly but there are no negative effects for them because they are aware of this.

- *Sometimes we need the help of bad friends, so we can't do what parents ask us to do.*
- *They don't use arrack and cigarettes. But it is hard to select what kind of friends, so I associate everybody but there are limits. I take the good things that I can get from them and don't take the bad ones.*

Some parents advise their adolescents to associate with clever friends. The parents think their adolescents will gain positive things from this and it will help them in their lives. It is clear that although parents advise them to associate with friends to gain positive things, in practice this is not always an easy thing to do. An example is that if a young person has a friend who drinks alcohol but they do not want to drink themselves, and then they need to have to have the self-control necessary to avoid it:

- *Mother tells me to associate with somebody who is smarter than me. I agree with her but I have many friends. I don't know whether this friend drinks or not. I associate with them all, but not all the time, only when there is good behaviour.*

- *I associate friends who drink. Though they drink, it is my responsibility to take care of myself. If I don't want to drink then they have no influence on me. I associate with everybody but there is a limit to what I will do.*

It is a common belief that we are also like the people we associate with. Therefore, parents do not want their adolescents to associate with friends who drink as this may, parents believe, damage their adolescent's reputation in society. Parents tell their adolescents not to be seen with such friends. There were several comments regarding this matter:

- *Some people have bad opinions of others. If we have friends like that and we are seen with them, then people think we are also like that. So my parents have told me to have friends who are from a good family*
- *If somebody becomes friendly with a person who drinks, others think that person has also started to drink. (aaaa arayath bonna puruduwela kiynawa) They think that is why they are here together.*
- *My parents said that if I have friends with bad habits people think that I am also bad. So they have told me to select good friends.*

In the focus group interviews, bad behaviour was defined in different ways. It depended on the parents' attitude and what parents think is good or bad for their adolescents. According to participants' comments, bad behaviour includes: smoking or drinking alcohol, having love affairs at an early age, wasting time with gangs, and not listening to their parents. Good behaviour includes: helping their friends when needed, having good grades at school, and having a good family background and good attitudes.

It was clearly described in the interviews that the majority of adolescents report that their parents hope that they will select friends who do not drink alcohol. Therefore parents do not recommend having friendships with those who do.

- *They told me not to have friends who have bad habits like alcohol drinking.*
- *Mainly it is friends "arrackku bona" who drink alcohol that my parents don't like.*

- *My family has told me not to drink or to associate with friends who get arrack and cigarettes.*

4.2.4 Alcohol and society

From the focus group interviews, several issues were identified about alcohol and its place in Sri Lankan society. These issues were: Sri Lankan adults' alcohol behaviour; gender differences in alcohol use; regulation of alcohol (i.e. enforcement agencies, the implementation of relevant laws, and advertising and media influence on adolescents alcohol use).

Alcohol use and gender

It appears that while Sri Lankan society does not accept female drinking, male adult drinking is generally accepted. Clearly adolescent male drinking is less acceptable. During the interviews mostly participants used the word "bad" to explain negative behaviour in adolescents but this meant different things for boys and girls. One boy asked a girl, "*Ok, for boys you can say that 'bad' means drinking alcohol, then what about girls? What kind of things are 'bad'?"* Then a girl answered and said that *"for a girl being bad means having affairs at an early age"*. Adolescent female drinking did not appear to be an issue.

It was clear that adult male drinkers have a permissive environment in both societies and the family to the use alcohol. Another participant described the situation in his family, "*our father drinks but mother doesn't argue with him. She doesn't say anything to him about it. But for us, she tells not to use alcohol and get a bad habit".*

Mothers' attitudes and behaviour were of interest in understanding gender relations in terms of alcohol use in the country. Most participants explained their mothers' position on their father's drinking. Those explanations indicated that most fathers have permission to drink, while their mothers struggle to deal with problems that arise from alcohol consumption. There were several comments regarding mothers' efforts to keep their adolescents away from alcohol. These comments indicated problems for the household when the father drinks and some comments

reflected the mothers' responsibility in the family for giving her adolescents a quiet place. There were some clues to understanding the situation of a family with a drinking father.

- *If a family has adolescent boys, if their father is a heavy drinker, then the lady in the family that means the mother says you can drink but don't make any problems here. Because I am here with my children. The mother normally says that kind of thing. But that mother doesn't like her children to drink and learn it from the father. It means she doesn't want her children to be addicted. …Because of that reason mother tells them 'don't drink like your father'. She says something like that. To father, she says 'you can drink but don't fight here'. It means maybe she knows that she can't help her husband to stop drinking. But, she tries to get her children to the correct path.*

- *Mothers think if father drinks in the house, then their children also may learn to do that. So some mothers ask the father not to drink at home*

During the interviews, there were some conversations about adolescents' selection of future partners. In those conversations, most of the girls commented that one of their main concerns was finding a non-drinker. Those participants pointed out several negative consequences of having a partner who drinks alcohol, so they want to find a non-drinker. One girl commented how drinking behaviour worked to undermine love in the family since the drinking person would be often elsewhere with friends. Another girl commented on how drinking affects the economic health of the family.

- *Actually, most of the time drinking can make problems in the family. In my case, I don't want the person I marry to drink. If I say 'no no' to his drinking all the time and if I ask why you drink all the time when there is a discussion like that it can mean a fight in the family. It can destroy love, because he may go out with friends most of the time for drinking..... If he gets drunk it may be an even bigger problem.*
- *Another thing is if we think about money. If they spend money on alcohol, then they have less concern about the family. Actually, when we think about the future, it is not a good thing for a family. As a girl, I think that if husband addicted to alcohol it is a problem.*

Adult alcohol behaviour in Sri Lanka

There were many comments regarding adults' alcohol behaviour in Sri Lanka. Most explanations indicated the negative impacts of drunken behaviour in society. A majority of participants had experienced how drunken people fight with others, how they disturb neighbours, stagger on roads and also how they have ruined their relationships with family members, including family violence, and neighbours. Participants' explanations suggested that people who have shown such behaviour are rejected by others in society. On the other hand, it was commented that neighbours do not worry about others drinking, as long as they do not make noise.

- *People who drink alcohol are not well regarded in society. Other people don't respect them. …. That is what my parents told me about alcohol drinking. It ruins your life. It doesn't give anything good.*
- *Some behave as if they were mad. I think they can't control their talking. So they say whatever they think. They say unnecessary things to people and try to get others to fight. They think they are strong, but people don't like this.*
- *They are aggressive and other people avoid them. So people who don't use alcohol move away from them.*

Some comments indicated that weddings and funerals are common places where alcohol is present. There was an interesting conversation about alcohol and parties. One participant said, '*most people go to parties because of alcohol. Currently, it is hard to find parties without alcohol'*. Then another participant said that '*if there is a party without alcohol we can say, it is like a restaurant without dull curry'*. "Dull curry" is one of the most popular curries in Sri Lanka.

When a participant talked about drunken behaviour at funerals, participants laughed, and most of them agreed with the comments. There was a short conversation about how drunken people behave at funerals and according to participants, this is a common situation in Sri Lanka. A participant explained how they cry sitting on the floor and they say whatever they want and people do not argue with them because they know that if they say anything, the drunken people will want to start a fight.

There were two drinking cultures identified by participants. The majority of participants talked about how their fathers have separate places to drink with their friends while two participants

talked about some kind of social drinking day-to-day at the dining table. When fathers have separate places to drink, they try to hide their drinking from adolescents. Normally their wives do not drink but supply food and other necessary things for the drinking.

The alternative culture, noted by two participants, represents different attitudes to alcohol consumption. They explained that although drinking does occur, it is limited and does not involve drunkenness or fighting. Those participants emphasised a family background and behaviour that they think is different from the behaviour which majority of participants noted. Specifically, they said that in that culture, female drinking is also accepted.

- *Ok, there are some, they consume it as part of the main meal. Not a lot, there is a limit. They do not drink a lot and, they do not go to a separate place to drink. The alcohol is part of the meal. At parties they provide beers, and most of the time, they serve beer, not arrack. Ladies also drink. So when mother and father drink, the child also drinks. After their drinking, there is no any problem. Don't reject that. I have seen that. In my presence, they have drunk.*
- *I would like to add a little bit to his comments. It's the same in our family. Even my father knows how to drink with control. Drinking comes with their job and culture. But they don't drink too much; it doesn't cause any problem in the family. He is like that, but his son, my brother is not. He doesn't have control.*

Legal age limit and adolescents purchase of alcohol

Participants mentioned that adolescents buy alcohol from both legal and illegal sources. In Sri Lanka, there is a procedure to get a licence to run a bar or any other place where alcohol is sold. It is illegal to sell alcohol to anyone under 21 years old and, if the buyer looks young, sellers should check their identification. According to participants, it is not hard for young people to buy alcohol either from legally licensed premises or illegal outlets.

The interviewer specifically asked participants: 'when it is illegal to sell alcohol to your age people, how do your age people buy alcohol?' A few participants said that they were not sure about how people sell alcohol to minors, but the majority of participants agreed that buying

alcohol is easy for adolescents. Some said that adolescents could get alcohol directly from bars because sellers are aware of the time when the police come around on patrol, but sometimes adolescents had to get adults to buy alcohol for them. One boy said that when adolescents get adult help, they then they give the balance of the money to the person who helped to get alcohol.

- *They get somebody to buy alcohol for them. It means they give money to an adult to get alcohol, and they give extra money to the adult and they get it.*
- *Children can't get alcohol from some places. But they ask older people to get it for them. So they can get other people to get arrack. There are some who do this way. Sometimes adolescents can get it themselves because sellers want the sale.*
- *[The sellers] sell to older looking children. They don't care about their age. But they sell to small children too. But they are more afraid of police if they sell to small children.*
- *The people who sell arrack know when the police come and so can give the children a time to come when the police are not around.*

Participants also described the impact of corrupt law agencies and the place of the alcohol industry in society. Bribery and corruption related to the alcohol industry are common topics in the community. Some participants described this fully. It is common that the most of the bar owners have relationships with local politicians and they run the business under politicians' supervision. A participant said that people who sell alcohol are powerful and they use politicians' power to escape punishment. Therefore selling alcohol to minors is hard to stop. One adolescent explained clearly how bar owners sell alcohol to minors and how they are not concerned about the laws regulating the industry. That participant explained that those alcohol sellers have connections with politicians in the area and, for that reason; they are more powerful than the law enforcement agencies. Participants reported that even if the police did catch anybody selling alcohol illegally, because of political influence the police have to release them. Participants explained the situation as follows:

- *There are some people who sell these things. They are powerful and strong. People are scared of them. The police also don't disturb them because they are also scared of them….. So if we can stop all these things it will be good. Those*

people work through ministers and parliamentarians. Though the police catch them they can get out easily. Police have to release them because of politics. It doesn't matter what kind of bad thing they have done. Police release them.

- *Some of them [the sellers] have been in business for a long time and are well known in the area. So they can get away with it if they are caught.*

From an economic perspective, price increases in a consumer good reduce the demand for that good (Jiang & Livingston, 2015). A reduction in the supply of alcohol and increase in the price would help to reduce adolescent alcohol consumption. Although there were few comments about this in the interviews, one participant described how the Sri Lankan government could apply this method to reduce the demand for alcohol by increasing the price. The idea is consistent with other literature. For example, Fraga et al. (2011) indicated that increasing prices is one of strategies to reduce adolescent alcohol use, something suggested by participants. The following examples make a similar point:

- *I think if the prices go up, it would be a good thing. Then people don't have enough money to buy alcohol and we can reduce people's drinking.*

The following quote reflects the views of a few participants who suggested that if the government made laws to reduce the places for purchase and stop bribery it may reduce adolescent alcohol use.

- *Though there are laws for alcohol use, they don't use them. So I think the law is not useful for stopping children's drinking. They have to stop the selling and the bribery. Then there won't be enough places to buy alcohol. Then they can't reach alcohol. So I think it will help to reduce alcohol use. That is the way to reduce drinking.*

Media influence on adolescents

Participants identified a number of issues regarding adolescent alcohol use and media influence. Firstly, most participants understood that they learned about alcohol from a variety of media sources. Secondly, they explained what they have seen on media and how it influenced their use of alcohol. Participants explained clearly how media target children and young people. Thirdly, they explained how media can be used positively to attempt to reduce adolescents' alcohol use.

According to participants' comments, television, movies, home, friends, parties and neighbours are the sources of first learning about alcohol. The majority of participants commented that they learnt about alcohol from television. According to Sri Lankan law, television channels are not allowed to show alcohol advertisements. But most of the channels telecast a variety of programmes with alcohol scenes. According to the law, if they include any alcohol scenes, the TV channel has to show a warning sign before the programmes. Some participants noted that those warnings are not always shown.

- *Most films have some alcohol scenes and even small kids watch films. Sometimes these scenes are cut but not always. I saw it when I was younger.*
- *Television programmes have a lot of scenes with alcohol drinking. They show lots of programmes from other countries with alcohol scenes. Children learn from them.*

Although the NATA act has banned alcohol advertising on any media in the country, it is clear that participants understand how alcohol advertisements target them, what kind of scenes carry alcohol and what the purposes of alcohol advertising are. Most participants explained different kinds of scenes they had seen on television. Some said that normally television portrays the use of alcohol for celebrations, happiness, and enjoyment and shows alcohol scenes during the New Year season. Another participant explained how television shows portray young people drinking alcohol without their parents' knowledge. So they watch these scenes, become familiar with the content, and maybe behave in the same way. The following quotes illustrate the adolescent experience of media influence:

- *There are some scenes with people drinking arrack. Friends gather and while they are talking they use alcohol. Children watch them and they think it is good because they see on the television.*
- *Television shows have scenes with children drinking. They show children drinking without their parents' knowledge.*
- *They show how gangs drink, talk and fight. They show what happens at parties and how people drink there. Children watch these programmes. So they are familiar with drinking behaviour.*

4.3 Conclusion

The four focus group interviews identified adolescents' views on alcohol use among people their own age and in society, and the role that parents play in influencing their intentions to drink.

A majority of adolescents noted that people their age people drink alcohol for fun and happiness, to assert their independence, because of the pressure of peers, and to reduce tension and sadness in their lives. Participants reported that parents had a strong view that friends are influential on the decision to drink, and most of the participants indicated that their parents wanted them to select friends with 'good qualities' especially, non-drinkers. Although parents recommend suitable friends, some participants rejected the idea of selecting friends on this basis. They indicated that they were responsible for their own choice of friends and that it was hard to associate only with those who did not drink. Adolescents, however, also understand that drinking is not a suitable lifestyle and that there are different ideas about drinking. They also understand the negative effects of alcohol consumption, such as health and family problems, low grades in schools and financial problems.

Importantly, most adolescents understand that they can buy alcohol from both legal and illegal sources and access it easily. They also clearly explained the corruption surrounding enforcement and how political influence can help sellers escape from legal action and fines. Though participants understand that preventing the current situation is hard, they had two suggestions:

having a third party agency to check on whether the law was implemented in a proper manner, and to increase the price of alcohol.

With respect to the role of parents, adolescents had a clear understanding of the difficulties some families had in dealing with alcohol. Most participants understand that their mothers are against alcohol use and even when their fathers drink, their mothers still had negative attitudes towards alcohol, and mothers' advice to adolescents is usually that their fathers' alcohol behaviours are not what is expected from their children.

Parents use different approaches to control their adolescents' alcohol use. While some parents have rules, other parents have a monitoring system to understand their adolescents' behaviour when they are not around them. In this category, one of the most important factors is parent-adolescent communication. Most participants noted that their parents do not discuss alcohol unless they are responding to some negative information or events. This opportunistic approach means that alcohol is rarely discussed fully.

The third main category is alcohol and society. Adolescents commented on adult drinking behaviour in Sri Lanka and the perceptions of alcohol in society. There were four sub-categories; alcohol use and the gender difference in the country, adults' alcohol behaviour in Sri Lanka, the legal age limit and adolescent alcohol use, media influence on adolescent drinking. These and other insights from the interviews supported the development of a culturally appropriate questionnaire for the cross-sectional survey, the findings of which are reported in the next chapter.

Chapter 5 Cross-sectional survey results

5.1 Introduction

In this chapter the results the cross-sectional survey are presented. The aim of the survey was to understand adolescents' attitudes towards alcohol, their views on other factors, such as peers, regulations and social norms, and alcohol, and how Sri Lankan parents engage with their adolescents in relation to adolescent alcohol use.

Section 5.2 of this chapter reports the results of confirmatory factor analysis. Section 5.3 reports the univariate analysis of on adolescents' experience of and views regarding: the use of alcohol by people under 21 years of age; the community and environmental circumstances that may influence their drinking; adolescents' adult alcohol consumption; and the role of parental engagement in adolescent alcohol consumption. Section 5.4 of this chapter reports the bivariate analysis of variables with age, gender and the respondents' decisions to drink alcohol and their attitudes regarding underage drinking.

This study uses the chi-square test and chi-square for the trend to test for significant relationships between variables, and reports relationships that are statistically significant $p < 0.05$.

5.2 Validation of the Instrument

The face validity and the content validity of the questionnaire are presented in chapter 3.5.5. The face validity was assessed through a pre-test of the Sinhala version of the questionnaire with ten students aged 15-18 years in Sri Lanka. They assessed the questionnaire for clarity and ease of completion. The content validity was assessed using the expertise of the staff of the Healthy Lanka organisation who independently reviewed the questionnaire to assess its cultural appropriateness.

The construct validity of the questionnaire was estimated using confirmatory factor analysis with three factors. These three factors were: parental communication, parental monitoring, and parental control. The steps of confirmatory factor analysis are presented in Chapter 3.5.10.

Three (latent variable) factors were:

- Latent Variable 1: Parental Monitoring
- Latent Variable 2: Parental Controlling
- Latent Variable 3: Parental Communication

5.2.1 Correlation Matrix

Table 5.1 shows the results of the correlation matrix of parental engagement variables and lists the parental engagement variables. For the correlation analysis, only 367 respondents were included as responses 'not applicable' were removed from the analysis**.** There are generally high correlations between mothers' and fathers' knowledge of spending (0.79) (monitoring), mothers' and fathers' deciding about friends (0.86) and spending (0.82) (controlling) and mothers' and fathers' discussing media portrayal freely (0.89) and being interested in their adolescent's opinions about alcohol (0.82) (communication). There is a low correlation between mothers and fathers with respect to knowing friends, suggesting a difference in engagement styles on this variable.

Most of the other correlations between variables are very low indicating that these variables are measuring independent dimensions. There are two exceptions with moderate levels of correlation: with fathers knowing friends and how pocket money is spent (0.42) and mothers discussing media portrayal and being mutually interested with the adolescent in opinions regarding alcohol (0.44).

Table 5.1 Correlation matrix of Parental engagement variables

	Momknow	Dadknow	MoSpend	Dadspend	Mdecide	Fdecide	Mmoney	Fmoney	Mdiscuss	Fdiscuss	Minter	Finter
Momknow	1.00	0.38	0.24	0.24	0.11	0.07	0.08	0.05	0.09	0.07	0.10	0.14
Dadknow	0.38	1.00	0.36	0.42	0.21	0.29	0.17	0.16	0.09	0.13	0.01	0.10
MoSpend	0.24	0.36	1.00	0.79	0.15	0.13	0.29	0.30	0.09	0.11	0.08	0.08
Dadspend	0.24	0.42	0.79	1.00	0.19	0.18	0.30	0.34	0.08	0.15	0.06	0.11
Mdecide	0.11	0.21	0.15	0.19	1.00	0.86	0.36	0.34	0.09	0.10	0.06	0.06
Fdecide	0.07	0.29	0.13	0.18	0.86	1.00	0.34	0.35	0.07	0.09	0.05	0.08
Mmoney	0.08	0.17	0.29	0.30	0.36	0.34	1.00	0.82	0.03	0.09	0.05	0.10
Fmoney	0.05	0.16	0.30	0.34	0.34	0.35	0.82	1.00	0.06	0.12	0.03	0.09
Mdiscuss	0.09	0.09	0.09	0.08	0.09	0.07	0.03	0.06	1.00	0.89	0.41	0.38
Fdiscuss	0.07	0.13	0.11	0.15	0.10	0.09	0.09	0.12	0.89	1.00	0.39	0.44
Minter	0.10	0.01	0.08	0.06	0.06	0.05	0.05	0.03	0.41	0.39	1.00	0.82
Finter	0.14	0.10	0.08	0.11	0.06	0.08	0.10	0.09	0.38	0.44	0.82	1.00

Momknow: My mother knows who my friends are

Dadknow: My father knows who my friends are

Mospend: My mother knows how I spend my pocket money

Dadspend: My father knows how I spend my pocket money

Mdecide: My mother decides which friends I spend time with

Fdecide: My father decides which friends I spend time with

Mmoney: My mother decides how I spend my pocket money

Fmoney: My father decides how I spend my pocket money

Mdiscuss: My mother and I discuss the media portrayal of alcohol freely

Fdiscuss: My father and I discuss the media portrayal of alcohol freely

Minter: My mother and I are interested in each others' opinion regarding alcohol use

Finter: My father and I are interested in each others' opinion regarding alcohol use

5.2.2 CFA tables and summary diagram

Table 5.2-5.4 describe the confirmatory factor analysis. The results of the principal component analysis are shown in appendix P. As noted in 5.2.1, the confirmatory factor analysis also included 367 respondents, as the Likert scale 'not applicable' responses were removed from the analysis. Therefore the CFA used respondent values between 1 and 5 for every question. Table 5.2 describes the confirmatory factor analysis for the latent variable 'Parental Monitoring'. The strongest of the seven factor loadings occurred for the two variables my mother/father 'know how I spend my pocket money' (0.87 and 0.91 respectively). By contrast, the loadings for 'my mother/father know who my friends are' are 0.27 and 0.43. My mother/father 'decide which friends I spend time with' (0.13, 0.12) and my mother/father decide how I spend my pocket money (0.34, 0.36) are much lower.

Table 5.2 Factor loadings on the latent Parental Monitoring variable

Variable	**Factor loading**
My mother knows who my friends are	0.27
My father knows who my friends are	0.43
My mother knows how I spend my pocket money	0.86
My father knows how I spend my pocket money	0.91
My mother decides which friends I spend time with	0.13
My father decides which friends I spend time with	0.12
My mother decides how I spend my pocket money	0.34
My father decides how I spend my pocket money	0.36

Table 5.3 reports the confirmatory factor analysis for the latent variable Parental Control. The factor loading of parental controlling for question ‘my mother decides which friends I spend time with’ is 0.9 and ‘my father decides which friends I spend time with’ is 0.94. The factor loadings of parental controlling for questions ‘my mother decide how I spend my pocket money’ and ‘my father decide how I spend my pocket money’ are much lower, both 0.35. One other variable, ‘my father knows who my friends are’ is also significant but at an even lower level (0.22).

Table 5.3 Factor loadings on the latent Parental Controlling variable

Variable	**Factor loading**
My father knows who my friends are	0.22
My mother decides which friends I spend time with	0.90
My father decides which friends I spend time with	0.94
My mother decides how I spend my pocket money	0.35
My father decides how I spend my pocket money	0.35

The highest factor loadings on the latent variable Parental Communication are for the questions ‘my mother and I discuss the media portrayal of alcohol freely’ (0.93) and ‘my father and I discuss the media portrayal of alcohol freely’ (0.95). The factor loadings of parental communication for questions ‘my mother and I are interested in each others’ opinion regarding alcohol use’ (0.44) and ‘my father and I are interested in each others’ opinion regarding alcohol use’ (0.45) are much lower. No other variables are represented.

Table 5.4 Factor loadings on the latent Parental Communication variable

Variable	Factor Loadings
My mother and I discuss the media portrayal of alcohol freely	0.93
My father and I discuss the media portrayal of alcohol freely	0.95
My mother and I are interested in each others' opinion regarding alcohol use	0.44
My father and I are interested in each others' opinion regarding alcohol use	0.45

The results above indicate that all the variables originally selected to represent particular aspects of parental engagement are confirmed by the confirmatory factor analysis as reflecting those parental engagement concepts. Each latent variable was represented by two strongly significant variables reflecting an aspect of both maternal and paternal engagement. Figure 5.1 summarises the factor loadings for those variables that were pre-identified as representing the three parental engagement measures.

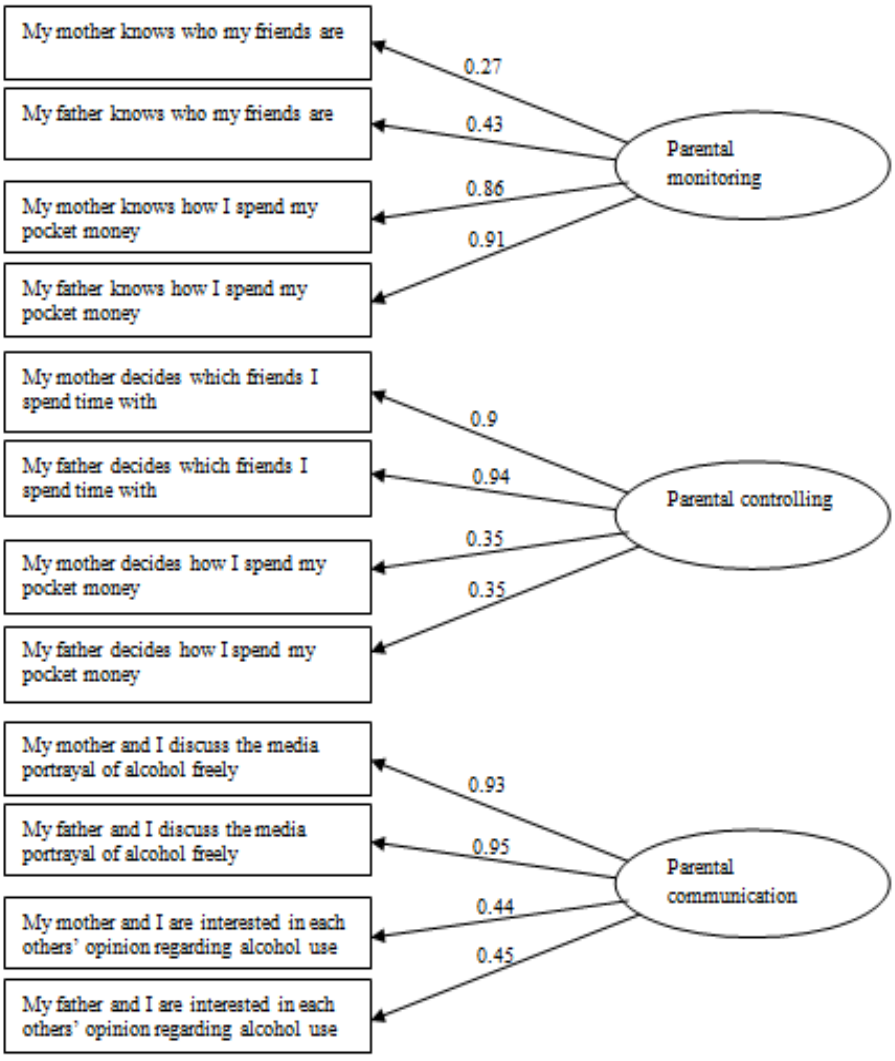

Figure 5.1 Confirmatory factor analysis summary

5.3 Results of Univariate Analysis

5.3.1 Demographic and social variables

Table 5.5 The number of estimated school students 13 – 18 years old in each district

District	**Age13–18 Students**
Colombo	92, 344 (38%)
Gampaha	57, 986 (24%)
Kandy	55,487 (23%)
Rathnapura	35,533 (15%)
Total	241, 350 (100%)

Table 5.5 presents the estimated school students 13-18 years old in each district. Participant adolescents were derived from these four districts in this research.

As shown in Table 5.6 and Table 5.7, a majority (62%) of the adolescents in the study were 16 and 17 years old, the sample had slightly more boys than girls (boys 51%), a majority were first born children (53%), and most of their parents had ordinary and advanced level education (father 58% and mother 70%). A total of 85% participants represented the first or second birth position in the family.

Table 5.6 Description of the participants in terms of demographic and family variables.

Variables	Category	N	Percent
Age in Years	15	123	22
	16	211	38
	17	131	24
	18	84	15
	Total	549	100
Gender	Male	282	51
	Female	267	49
	Total	549	100
Birth position in the family	1	290	53
	2	177	32
	3	56	10
	4	24	05
	5	2	00
	Total	549	100
Number of Siblings	0	65	12
	1	261	48
	2	176	32
	3	39	07
	4	6	01
	5	2	00
	Total	549	100

Table 5.7 Description of the participants' parents' education level

Variable	Category	N	Percent
Father's education level	Not complete school	23	04
	Ordinary level	135	25
	Advanced level	183	33
	Diploma or certificate	15	03
	Vocational & training	49	09
	Degree	29	05
	Don't know	17	03
	Other	98	18
	Total	549	100
Mother's education level	Not complete school	20	04
	Ordinary level	174	32
	Advanced level	206	38
	Diploma or certificate	10	02
	Vocational & training	24	04
	Degree	27	05
	Don't know	12	02
	Other	76	13
	Total	549	100

5.3.2 Adolescent views on and experience of alcohol use

One of the objectives of this study was to understand adolescents' views on underage drinking. Participants were asked to respond to the question 'I think it is ok to drink when under 21 years of age'. A majority of respondents (87%) reported that they disagreed with the statement (Table.5.8).

Participants were asked two questions about their actual experience of underage drinking: 'I have drunk alcohol myself' and 'I have seen other people under 21 years of age drink alcohol'.

According to Table 5.9, a high proportion of participants (498; 91%) disagreed that they have drunk alcohol. Despite very few participants agreeing that they have drunk alcohol, a considerable proportion (387; 71%) agreed that they had seen other people under 21 years of age drinking. This indicates that though these participants did not drink, or at least reported that they did not drink, their friends may have drunk in their presence.

Table 5.8 Adolescents' view on using alcohol under 21 years old

Variable	Category	N	Percent
It's OK to drink when under 21 years of age	Agree	22	04
	Neutral	33	06
	Disagree	479	87
	Not Applicable	15	03
	Total	549	100

Table 5.9 Adolescents' experiences on using alcohol

Variable	Category	N	Percent
I have drunk alcohol myself	Agree	29	05
	Neutral	12	02
	Disagree	498	91
	Not Applicable	10	02
	Total	549	100
I have seen other people under 21 years of age drink alcohol	Agree	387	71
	Neutral	44	08
	Disagree	96	17
	Not Applicable	22	04
	Total	549	100

5.3.3 Adolescent views on community and environmental factors influencing their drinking

Invitation to drink by friends

As shown in Table 5.10, 50 (9 %) participants reported that their friends invite them to drink.

Table 5.10 My friends invite me to drink

Variables	Category	N	Percent
My friends invite me to drink	Agree	50	9
	Neutral	23	4
	Disagree	454	83
	Not Applicable	21	4
	Total	549	100

5.3.4 Stated reasons why adolescents drink alcohol

As shown in Table 5.11, six variables were used to explore reasons why young people drink alcohol:

- they want to have fun
- they are sad and depressed
- they want to feel better about themselves
- to rebel against parents, teachers and adults around them
- fit in and be accepted by friends and peers
- to find solutions to their problems with family, friends and others

There are considerable differences in the levels of agreement with these reasons for drinking. The results demonstrated that a high proportion of participants (426; 77%) reported that young people drink alcohol to have fun whereas nearly as many (392; 71%) reported that young people drink because they are sad and depressed. Young people also drink alcohol to make themselves feel better, with a total of 344 (63%) respondents agreeing with the statement. A smaller proportion of young people drink alcohol to fit in with friends, with 309 (57%) respondents agreeing with the statement. Fewer young people drink alcohol to find solutions for their problems (214; 39%) or to rebel against the adults around them (177; 32%).

Table 5.11 Reasons why young people drink alcohol

Variables	Category	N	Percentage
To have fun	Agree	426	77
	Neutral	50	9
	Disagree	59	11
	Not Applicable	14	3
	Total	549	100
They are sad and depressed	Agree	392	71
	Neutral	71	13
	Disagree	71	13
	Not Applicable	15	3
	Total	549	100
To feel better about themselves	Agree	344	63
	Neutral	104	19
	Disagree	86	15
	Not Applicable	15	3
	Total	549	100
To rebel against their parents, teachers and adults	Agree	177	32
	Neutral	153	28
	Disagree	187	34
	Not Applicable	32	6
	Total	549	100
To fit in and be accepted by their friends and peers	Agree	309	57
	Neutral	107	19
	Disagree	109	20
	Not Applicable	24	4
	Total	549	100
To find solutions for their problems with family, friends and others	Agree	214	39
	Neutral	129	24
	Disagree	177	32
	Not Applicable	29	5
	Total	549	100

5.3.5 Access to alcohol for adolescents

Another objective of this study was to examine the community environment and adolescent alcohol use, of which access is a part. Table 5.12 shows that most participants obtain alcohol from illegal places (53%) or from friends (45%). Although sometimes they access alcohol from their neighbours (28%) or legal places (28%), they hardly ever obtain alcohol from their parents' houses (2%).

Table 5.12 Places where young people under the age of 21 obtain Alcohol

Variable	Category	N	Percent
Parent's home	Agree	10	2
	Neutral	46	8
	Disagree	433	79
	Not applicable	60	11
	Total	549	100
Legal Places	Agree	152	28
	Neutral	102	19
	Disagree	238	43
	Not applicable	57	10
	Total	549	100
Friends	Agree	247	45
	Neutral	94	17
	Disagree	153	27
	Not applicable	55	10
	Total	549	100
Neighbours	Agree	153	28
	Neutral	116	21
	Disagree	215	39
	Not applicable	63	11
	Total	549	100
Illegal Places	Agree	287	53
	Neutral	75	14
	Disagree	136	25
	Not applicable	51	9
	Total	549	100

5.3.6 Circumstances reported as responsible for the problem of young people drinking

During focus group discussions, participants expressed a range of views on possible new strategies to reduce adolescents' alcohol consumption. Discussions revealed that they did not have accurate knowledge of the NATA Act or Sri Lankan alcohol policies. Therefore, they emphasised the need for new government rules and regulations. They also discussed how television highlights alcohol scenarios and targets the younger generation and their views indicated that they did not have knowledge about the advertising was banned by the NATA Act.

Participants were asked 'who contributes to the problem of young people drinking', with response options; weak government regulations, advertising of alcohol, permissive attitudes of society or poor law enforcement'. As shown in following Table 5.13 76% (418 respondents) attributed this to weak government regulation, 72% (394) to poor law enforcement, 70% (384), to advertising of alcohol, and 67% (367) to the permissive attitudes of society.

Table 5.13 Circumstances reported as responsible for the problem of young people drinking

Variable	Category	N	Percent
Weak government regulations	Agree	418	76
	Neutral	68	13
	Disagree	42	8
	Not Applicable	21	3
	Total	549	100
Advertising of alcohol	Agree	384	70
	Neutral	55	10
	Disagree	85	15
	Not Applicable	25	5
	Total	549	100
Permissive attitudes of society	Agree	367	67
	Neutral	80	14
	Disagree	65	12
	Not Applicable	37	7
	Total	549	100
Poor law enforcement	Agree	394	72
	Neutral	67	12
	Disagree	55	10
	Not Applicable	33	6
	Total	549	100

5.3.7 Parental views on alcohol consumption

This survey contained two questions inviting respondents to assess their parents' views on adolescent alcohol drinking. Participants were asked whether their parents were against adolescents' alcohol use. There is no difference in the pattern of perceived behaviour by fathers and mothers. As shown in Table 5.14, 403 (92%) participants agreed that their father was against adolescent alcohol use, with 408 (92%) agreeing that their mother is against adolescent alcohol use.

Table 5.14 Parents views on adolescent drinking

Variables	Category	N	Percent
My father is against adolescents' alcohol use	Agree	503	92
	Neutral	10	02
	Disagree	29	05
	Not Applicable	7	01
	Total	549	100
My mother is against adolescents' alcohol use	Agree	508	92
	Neutral	3	01
	Disagree	31	06
	Not Applicable	7	01
	Total	549	100

5.3.8 Parents/Caregivers permit adolescents to drink alcohol at home

When asked specifically 'my parents/caregivers permit me to drink at home', only 5 (1%) agreed that they are allowed to have alcohol at their home and almost all the participants (534; 97%) answered that they are not allowed to have alcohol at home. The details in Table 5.15 clearly demonstrated that Sri Lankan parents do not support adolescents' drinking and try to prevent this.

Table 5.15 Parents/caregivers permit adolescents to drink alcohol at home

Variable	Category	N	Percent
My parents/caregivers **p**ermit me to drink alcohol at home	Agree	5	01
	Neutral	2	00
	Disagree	534	97
	Not Applicable	8	02
	Total	549	100

5.3.9 Adolescent perceptions of adult drinking

Consequences of adult drinking

Participants were asked to report their experience of alcohol-related behaviour in society, with five adult behaviour categories listed in the questionnaire. All these behaviour categories were generated from focus group discussions, with survey responses revealing that adolescents are good observers of adult alcohol behaviour in Sri Lanka.

The five behavioural categories were:

- fighting with others
- disturbing neighbours and making noise
- walking unsteadily on the road
- ruining their family members' lives
- living happily with family and neighbours.

As shown in table 5.16, over 50% reported that they agreed that fighting with others, disturbing neighbours and making noise, walking unsteadily on the road, and ruining their family members' lives are associated with adult alcohol consumption. On the other hand, over 50% participants reported that they disagreed that a happy life with their families is associated with adult drinking.

Table 5.16 Adolescent perception of behaviours associated with adult alcohol consumption

Variable	Category	N	Percent
Fighting with others	Agree	316	57
	Neutral	53	10
	Disagree	167	31
	Not Applicable	13	2
	Total	549	100
Disturbing neighbours and making noise	Agree	308	57
	Neutral	48	9
	Disagree	175	31
	Not Applicable	18	3
	Total	549	100
Walking unsteadily on the road	Agree	329	60
	Neutral	31	6
	Disagree	170	31
	Not Applicable	19	3
	Total	549	100
Ruining their family members' life	Agree	297	54
	Neutral	48	9
	Disagree	190	35
	Not Applicable	14	2
	Total	549	100
Living happily with the family and neighbours.	Agree	157	28
	Neutral	64	12
	Disagree	308	56
	Not Applicable	20	4
	Total	549	100

5.3.10 Female drinking

To examine female drinking in society, respondents were asked whether they have seen a female drinking. As can be seen from Table 5.17, 299 respondents (55%) agreed that they had seen a female drinking alcohol. In contrast, 184 (33%) respondents reported that they had not seen a female drinking.

Table 5.17 I have seen a female drinking

Variable	Category	N	Percent
I have seen a female drinking	Agree	299	55
	Neutral	45	8
	Disagree	184	33
	Not applicable	21	4
	Total	549	100

5.3.11 Adolescents views of parental drinking

According to Table 5.18, 22% respondents reported their father's drinking while no one reported their mother drinking alcohol.

Table 5.18 Perceptions of parent's alcohol drinking

Variables	Category	N	Percent
My father drinks alcohol	Agree	121	22
	Neutral	94	17
	Disagree	322	59
	Not Applicable	12	02
	Total	549	100
My mother drinks alcohol	Agree	3	00
	Neutral	64	12
	Disagree	482	88
	Not Applicable	00	00
	Total	549	100

5.3.12 Parental engagement

Parental engagement with adolescents

This section presents features of parental engagement as perceived by respondents. Three categories of parental engagement were used: parental monitoring, controlling and communication. Each was represented by four items, a total of 12 parental engagement items. Each item of parental engagement was assessed using five-point scale and a 'not applicable' category.

Overview of respondents' views of parental monitoring, controlling and communication

Parental monitoring

Participants were asked two questions regarding their mother's monitoring. The first one was 'my mother knows who my friends are' and the second was 'my mother knows how I spend my pocket money'. As shown in Table 5.19, a majority of participants (92%) agreed that their mother knows who their friends are and that their mother knows how they spend their pocket money (83%).

Table 5.19 Mother's monitoring

Variables	Category	N	Percent
My mother knows who my friends are	Agree	512	92
	Neutral	22	04
	Disagree	12	03
	Not Applicable	3	01
	Total	549	100
My mother knows how I spend pocket my money	Agree	453	83
	Neutral	41	07
	Disagree	45	08
	Not Applicable	10	02
	Total	549	100

To examine fathers' monitoring, respondents were asked the same questions as were asked of their mothers. Although there was some difference between mother's and father's monitoring, a strong majority of respondents reported that they agreed that their fathers knew who their friends were (82%) and knew how they spent their pocket money (77%). These findings are shown in Table 5.20.

Table 5.20 Father's monitoring

Variables	Category	N	Percent
My father knows who my friends are	Agree	450	82
	Neutral	52	1
	Disagree	39	07
	Not Applicable	8	01
	Total	549	100
My father knows how I spend pocket my money	Agree	426	77
	Neutral	55	10
	Disagree	57	11
	Not Applicable	11	02
	Total	549	100

Parental controlling

Again, parental control variables contained two items for each parent, with adolescents asked the same questions regarding their father's and mother's controlling behaviour.

As shown in Table 5.21, there was much lower agreement on variables related to mother's controlling (46% for 'my mother decides which friends I spend time with'; 46% on 'my mother decides how I spend my pocket money') compared with the variables related to maternal monitoring. It is worthwhile to note that a considerable number of respondents (20% on both variables) reported that they have a neutral view regarding the variables related to mothers' controlling behaviour.

Table 5.21 Mother's controlling

Variables	Category	N	Percent
My mother decides which friends I spend time with	Agree	253	46
	Neutral	107	20
	Disagree	177	32
	Not Applicable	12	02
	Total	549	100
My mother decides how I spend pocket money	Agree	255	46
	Neutral	114	21
	Disagree	155	28
	Not Applicable	25	5
	Total	549	100

Table 5.22 demonstrated the participants' responses on 'fathers' controlling' variables. The results of the Table 5.22 shows a similarity with mothers controlling. As shown in Table 5.22, there was much lower agreement on variables related to father's controlling (43% for 'my father decides which friends I spend time with; 43% on 'my father decides how I spend my pocket money) compared with the variables related to paternal monitoring. Again, it is noted that a considerable number of respondents reported that they have a neutral view regarding the variables related to fathers' controlling behaviour.

Table 5.22 Father's controlling

Variables	Category	N	Percent
My father decides which friends I spend time with	Agree	240	43
	Neutral	113	21
	Disagree	183	34
	Not Applicable	13	02
	Total	549	100
My father decides how I spend my pocket money	Agree	233	43
	Neutral	122	22
	Disagree	175	32
	Not Applicable	19	03
	Total	549	100

Parental Communication

As in other parental engagement categories, two identical items were used to assess both mothers' and fathers' communication with their adolescent. To examine the mother's communication, the first statement the participants were asked was 'mother and I discuss the media portrayal of alcohol'. A total of 229 (41%) participants reported that they agreed with the statement and whereas 201 (37%) participants respondents indicated that they disagreed.

The second statement regarding mother's communication was 'mother and I are interested in each other's opinion regarding alcohol use'. This showed a slightly higher level of agreement compared with the first statement, a total of 273 (49%) respondents reported that they agreed with the statement with165 (29%) respondents reporting disagreement. Table 5.23 shows the results of mother's communication with their adolescents.

Table 5.23 Mother's communication

Variables	Category	N	Percent
Mother and I discuss the media portrayal of alcohol	Agree	229	41
	Neutral	61	11
	Disagree	201	37
	Not Applicable	59	11
	Total	549	100
Mother and I are interested in each other's opinion regarding alcohol use	Agree	273	49
	Neutral	89	16
	Disagree	155	29
	Not Applicable	32	06
	Total	549	100

The results for fathers' communication are shown in Table 5.24. Both agreement and disagreement responses are similar (39%) to the statement 'father and I discuss the media portrayal of alcohol'. The statement 'my father and I are interested in each others' opinions

about alcohol use' indicated a lower level of positive responses. A total of 215 (37%) agree with the statement with 174 (32%) disagreeing.

Table 5.24 Father's communication

Variables	Category	N	Percent
Father and I discuss the media portrayal of alcohol	Agree	212	39
	Neutral	67	12
	Disagree	214	39
	Not Applicable	56	10
	Total	549	100
Father and I are interested in each others' opinion regarding alcohol use	Agree	247	45
	Neutral	96	17
	Disagree	174	32
	Not Applicable	32	06
	Total	459	100

Summary of parental engagement

Table 5.25 presents the average of responses by both fathers and mothers on the two variables in each engagement category.

Respondents clearly identified parental monitoring on average as the most common engagement type, with 87.5% agreeing on the presence of mother's monitoring and 79.5% of father's monitoring and therefore few disagreeing or remaining neutral. Parental controlling is identified at much lower levels. Only 46% agreed that maternal controlling was present, with 43% responding this way to paternal control. There are only minor differences between reported levels of communication and controlling with 38.5% agreeing with the presence of maternal communication and 42% responding the same way to the presence of paternal communication. Compared with parental monitoring, both controlling and communication reported larger proportions both disagreeing and remaining neutral on these topics.

Table 5.25 Average results of each parental engagement category

Parental engagement	Agree	Neutral	Disagree	Not applicable
Mother's monitoring	87.5%	5.5%	5%	1.5%
Father's monitoring	79.5%	5.5%	9%	1.5%
Mother's controlling	46%	20.5%	31%	3.5%
Father's controlling	43%	21.5%	33%	2.5%
Mother's communication	38.5%	18.5%	33%	8.5%
Father's communication	42%	19.5%	35.5%	8%

5.4 Bivariate Analysis

5.4.1 Adolescent views on and experience of alcohol use

Adolescent drinking experiences and age

As shown in Table 5.26, participants' view on 'it is OK to drink alcohol under 21 years of age' has shown marginally significant association with participants' age at 5%.

Participants' own experiences of alcohol drinking ('I have drunk alcohol myself') and age were cross-tabulated. As showed in Table 5.26, the chi-square test for trend showed a significant disagreement trend over the age from 15 years of age to 18 years of age (p=0.002). Younger respondents were more likely than older respondents (15 =96.0%, 16 =95.7%, 17=90.7% and 18 82.5%) to report that they disagreed with the statement of 'I have drunk alcohol'.

As shown in Table 5.26, participants' experiences of seeing alcohol use by those under 21 years of age shows a significant relationship with increasing age from age 15 to age 18. Older participants (age 18, 89.5%) were more likely to report agreement of seeing underage drinking

than younger participants (age 15, 66.7%). The chi-square test of trend showed a significant relationship over the age from age 15 to 18 (p=0.024).

Table 5.26 Cross-tabulation of participants' response regarding their view on and experience of adolescent alcohol consumption

Variable	Categories (Age in years)	Agree N(%)	Neutral N(%)	Disagree N(%)	P. value
It is OK to drink under 21 years of age	15	1(1.3)	1(1.3)	73(97.3)	0.05*
	16	2(1.4)	10(7.2)	126(91.3)	
	17	7(7.2)	5(5.2)	85(87.6)	
	18	2(3.5)	4(7.0)	51(98.5)	
I have drunk alcohol	15	1(1.3)	2(2.7)	72(96.0)	0.002*
	16	4(2.9)	2(1.4)	132(95.7)	
	17	7(7.2)	2(2.1)	88(90.7)	
	18	8(14.0)	2(3.5)	47(82.5)	
I have seen other people under 21 years of age drink alcohol	15	50(66.7)	10(13.3)	15(20.0)	0.02*
	16	99(71.1)	9(6.5)	30(21.7)	
	17	76(78.4)	4(4.1)	17(17.5)	
	18	51(89.5)	3(5.3)	3(5.3)	

It is ok to drink to drink, X^2 =3.6964, df =1 , p=0.05
I have drunk, X^2 =9.9079, df = 1, p=0.002
I have seen underage drinking, X^2 =5.0792, df = 1, p=0.02

Adolescent drinking experiences and gender

Table 5.27 shows the cross-tabulated results of the relationship between gender and participants' responses regarding young people's drinking under 21 years of age, participants' own alcohol consumption and whether participants had seen others under 21 years of age drink alcohol. Chi-square tests found two significant relationships. First, female respondents (173, 94.0%) were more likely than males (162, 88.5%) to report that they disagree/strongly disagree with the statement of 'It is OK to drink alcohol under 21 years of age' (p= 0.02). Second, Table 5.27 also shows that the participants' gender was significantly associated with adolescents' own alcohol consumption. Although, the level of agreement of own use of alcohol by males was low (8.7%), the difference between this and female drinking (2.2%) was statistically significant (p=0.002).

Although, two variables, 'it is ok to drink under 21 years of age' and 'I have drunk alcohol myself' have shown differences by gender, there was no significant association found between participants' gender and their experience of seeing other people drinking under 21 years.

Table 5.27 Cross-tabulation of participants' response regarding their view on and experience and seeing other young people drink alcohol

Variable	Categories	Agree N(%)	Neutral N(%)	Disagree N(%)	P-value
It is ok to drink alcohol under 21 years of age	Male	5(2.7)	16(8.7)	162(88.5)	0.02*
	Female	7(3.8)	4(2.2)	173(94.0)	
I have drunk alcohol myself	Male	16(8.7)	7(3.8)	160(87.4)	0.002*
	Female	4(2.2)	1(0.5)	179(97.3)	
I have seen other people under 21 years of age drink alcohol	Male	147(78.1)	11(6.0)	29(15.8)	0.42
	Female	133(72.3)	15(8.2)	36(19.6)	

Ok to drink under 21 years old, X^2 =7.8919, df =2 , p=0.02
I have drunk, X^2 =12.762, df =2 , p=0.002

5.4.2 Adolescent views on community and environmental factors that might influence their drinking

Peer relationship with alcohol with age and gender

When responses to the statement 'my friends invite me to drink' are cross-tabulated by age and tested with the chi-square test of trend, a strongly significant relationship was found (p<.0.001). As shown in the Table 5.28, younger participants were significantly more likely to disagree/strongly disagree with the statement of 'my friends invite me to drink' than older participants.

Table 5.28 Cross- tabulations of 'my friends invite me to drink', by age

Variable	Categories (Age in years)	Agree N(%)	Neutral N(%)	Disagree N(%)	P. value
My friends invite me to drink	15	4(5.3)	0(0.0)	71(94.7)	<0.001
	16	11(8.0)	7(5.1)	120(87.0)	
	17	6(6.2)	10(10.3)	81(83.5)	
	18	15(26.3)	2(3.5)	40(70.2)	

$X^2 = 14.735$, df = 1, p<0.001

Table 5.29 shows the cross-tabulated results of responses to 'my friends' invite me to drink' with gender. According to the results, more female respondents were likely than male respondents to report that they disagreed with the statement of 'my friends invite me to drink alcohol' (177, 96.2% vs. 135, 73.8%). A significant association was found between the likelihood of friends inviting a young person to drink and male gender at 5%.

Table 5.29 Cross- tabulations of responses to 'my friends invite me to drink' and gender

Variable	Categories	Agree N(%)	Neutral N(%)	Disagree N(%)	P. value
My friends invite me to drink	Male	29(15.8)	19(10.4)	135(73.8)	<0.001
	Female	7(3.8)	0(0.0)	177(96.2)	

X^2= 38.096, df=2, p<0.001

5.4.3 Adolescent views on reasons why young people drink

Cross-tabulation of reasons why young people drink with age

The responses to the question why young people drink alcohol were cross-tabulated with the participants' age (Table 5.30) and the relationship between the variable and ages tested using chi-square test for trend.

With the exception of the reason 'to rebel against the adults around them' all the other reasons showed a significant trend of agreement by age from 15 to 18. In Table 5.26, the chi-square trend of test showed a significant relationship at 5% with the reasons: 'to have fun', 'for sadness and depression', 'to feel better about themselves', 'to fit in with friends' and 'to find solutions for their problems'

Table 5.30 Cross-tabulation of reasons why young people drink alcohol with participant's age

Variable	Categories (Age in years)	Agree N(%)	Neutral N(%)	Disagree N(%)	p-value
To have fun	15	56(74.7)	8(10.7)	11(14.7)	0.04*
	16	114(82.6)	15(10.9)	9(6.5)	
	17	80(82.5)	11(11.3)	6(6.2)	
	18	51(89.5)	4(7.0)	2(3.5)	
For sadness or depression	15	52(69.3)	9(12.0)	14(18.7)	0.01*
	16	104(75.4)	23(16.7)	11(8.0)	
	17	79(81.4)	12(12.4)	6(6.2)	
	18	49(86.0)	7(12.3)	1(1.8)	
To feel better about themselves	15	44(58.7)	14(18.7)	17(22.7)	0.02*
	16	93(76.4)	32(23.2)	13(9.4)	
	17	66(68.0)	20(20.6)	11(11.3)	
	18	45(78.9)	9(15.8)	3(5.3)	
To rebel against the adults around them	15	29(38.7)	15(20.0)	31(41.3)	0.6
	16	51(37.0)	47(34.1)	40(29.0)	
	17	36(37.1)	32(33.0)	29(29.0)	
	18	25(43.9)	24(42.1)	8(14.0)	
To fit in with friends	15	40(53.3)	14(18.7)	21(28.0)	0.03*
	16	84(60.9)	31(22.5)	23(16.7)	
	17	61(62.9)	24(24.7)	12(12.4)	
	18	41(71.9)	13(24.6)	2(3.5)	
To find solutions for their problems	15	33(44.0)	16(21.3)	26(1.3)	0.02*
	16	54(39.1)	42(30.4)	42(30.4)	
	17	34(35.1)	31(32.0)	32(33.0)	
	18	39(68.4)	8(14.0)	10(17.5)	

To have fun, X^2 =4.0537, df =1 , p=0.04

For sadness or depression, X^2 =6.3801, df =1 , p=0.01

Feel better about themselves, X^2 =5.2731, df =1 , p=0,02

To fit in with friends, X^2 =4.4805, df = 1, p=0.03

To find solution for their problems, X^2 =6.8807, df =1 , p=0.02

Cross-tabulation of why young people drink alcohol with gender

As shown in Table 5.31, all the reasons why young people drink alcohol were cross-tabulated with the gender and the relationships tested using chi-square analysis. Results showed that female respondents were more likely to report that young people drink alcohol for fun (85.9%) than male respondents (78.1%). This was marginally significant p=0.05. However, for all other reasons, there were stronger significant associations with gender. Although, alcohol use is a predominantly male activity in all cases females were more likely to agree than males that these were reasons to drink.

Table 5.31 Cross tabulation of the reason why young people drink alcohol with gender

Variable	Categories	Agree N(%)	Neutral N(%)	Disagree N(%)	P. value
To have fun	Male	143(78.1)	20(10.9)	20(10.9)	0.05*
	Female	158(85.9)	18(9.8)	8(4.3)	
For sadness or depression	Male	132(72.1)	27(14.8)	24(13.1)	0.01*
	Female	152(82.6)	24(13.0)	8(4.3)	
To feel better about themselves	Male	111(60.7)	37(20.2)	35(19.1)	<0.001*
	Female	137(74.5)	38(20.7)	9(4.9)	
To rebel against adults around them	Male	58(31.7)	55(30.1)	70(38.3)	<0.001*
	Female	83(45.1)	63(34.2)	38(20.7)	
To fit in with friends	Male	95(51.9)	44(24.0)	44(24.0)	<0.001*
	Female	131(71.2)	39(21.2)	14(7.6)	
As a solution for their problems	Male	61(33.3)	54(29.5)	68(37.2)	<0.001*
	Female	99(53.8)	43(23.4)	42(22.8)	

To have fun, X^2 =5.9929, df =2, p=0.05
For sadness and depression, X^2 =9.5823, df =2, p=0.01
Feel better about themselves, X^2 =18.1, df =2, p<0.001
To rebel against adults, X^2 =14.454, df =2, p<0.001
To fit in with friends, X^2 =21.55, df =2, p<0.001
As a solution for problems, X^2 =17, df = 3, p<0.001

5.4.4 Access to alcohol for adolescents

The places where young people can obtain alcohol were cross-tabulated with participants' age. There was no significant difference when the chi-square test for trend was performed to test the association between participants' responses on possible sources of alcohol and age.

Table 5.32 presents the cross-tabulation between the places where young people can obtain alcohol and gender. Chi-square testing demonstrates that there no significant relationship between male and female views on whether young people can access alcohol from their parents' home or legal sources. Female respondents, however, were more likely to report that they agreed than male respondents that, friends, neighbours and illegal places are sources of alcohol for young people, all significant at p=<0.001

Table 5.32 Cross-tabulation of the main places where young people under the age of 21 obtain alcohol with gender

Variable	Categories	Agree N(%)	Neutral N(%)	Disagree N(%)	P. value
Parent's home	Male	5(2.7)	18(9.8)	160(87.4)	0.7
	Female	3(1.6)	21(11.4)	160(87.0)	
Legal places	Male	56(30.6)	37(20.2)	90(49.2)	0.89
	Female	54(29.3)	41(22.3)	89(48.4)	
Friends	Male	76(41.5)	38(20.8)	69(37.7)	<0.001*
	Female	107(58.2)	40(21.7)	37(20.1)	
Neighbours	Male	33(18.0)	44(24.0)	106(57.9)	<0.001*
	Female	81(44.0)	46(25.0)	57(31.0)	
Illegal places	Male	86(47.0)	31(16.9)	66(36.1)	<0.001*
	Female	127(69.0)	31(16.8)	26(14.1)	

Friends, X^2 =14.96, df =2, p<0.001
Neighbours, X^2 =34.983, df =2, p<0.001
Illegal places, X^2 = 25.281, df =2, p<0.001

5.4.5 Circumstances reported as responsible for the problem of young people drinking

The areas considered important in contributing to the problem of young people drinking were cross-tabulated with age. According to cross-tabulated results, only weak government regulation was found to be even marginally significantly associated with age (p=0.05) and no significant association was found at 5% between age and the other three areas; advertising of alcohol, permissive attitudes and poor law enforcement. Nevertheless, it can be noted that for all four areas, older respondents were more likely to agree that these contributed to the problem than younger respondents.

The areas considered important in contributing to the problem of young people drinking were also cross-tabulated with gender.

As shown in Table 5.33, there was no significant association between three of the four areas considered important to contributing to the problem of young people's drinking. Out of four variables, only 'weak government regulation' was found to have a strong significant association with gender (p=0.001) with females more likely to report this.

Table 5.33 Cross-tabulation of areas considered important in contributing to the problem of young people drinking with gender

Variable	Categories	Agree N(%)	Neutral N(%)	Disagree N(%)	P. value
Weak Government regulations	Male	142(77.6)	20(10.9)	20(11.5)	<0.001*
	Female	148(80.4)	32(17.4)	4(2.2)	
Advertising of alcohol	Male	139(76.0)	15(8.2)	29(15.8)	0.27
	Female	139(75.5)	23(12.5)	22(12.0)	
Permissive attitudes in society	Male	127(69.4)	32(17.5)	24(13.1)	0.6
	Female	132(71.7)	34(18.5)	18(9.8)	
Poor law enforcement	Male	146(79.8)	21(11.5)	16(8.7)	0.4
	Female	138(75.0)	30(16.3)	16(8.7)	

Government regulations**,** X^2 =14.451 , df =2 , p<0.001

5.4.6 Adolescent views on adult drinking in the community

Views on alcohol use and adult behaviour, by age

Table 5.34 shows the cross-tabulated results of views on the consequences of adults alcohol use by respondent age. Chi-square test for trend showed a significant association at 5% between age and the associated behaviour disturbing neighbours and making noise and walking unsteadily. Although Table 5.34 showed that participants' age was not found to be significantly associated at 5% with alcohol use and fighting with others, ruining their family members' lives and living happily with the family and neighbours, it can be noted that higher proportions of older participants agreed that the negative behaviours were associated with alcohol use than did younger participants.

Table 5.34 Cross-tabulation of perceptions of adults' alcohol use behaviour with participant age

Variable	Categories (Age in years)	Agree N(%)	Neutral N(%)	Disagree N(%)	P. value
Fighting with others	15	39(52.0)	9(12.0)	27(36.0)	0.07
	16	88(63.8)	16(11.6)	34(24.6)	
	17	49(50.5)	2(12.4)	36(37.1)	
	18	46(80.7)	4(7.0)	7(12.3)	
Disturbing neighbours and making noise	15	33(44.0)	9(12.0)	33(44.0)	0.01*
	16	84(60.9)	15(10.9)	39(28.3)	
	17	52(53.6)	8(8.2)	37(38.1)	
	18	47(82.5)	4(7.0)	6(10.5)	
Walking unsteadily on the roads	15	44(58.7)	3(4.0)	28(37.3)	0.05*
	16	92(66.7)	8(5.8)	38(27.5)	
	17	52(53.6)	7(7.2)	38(39.2)	
	18	47(82.5)	3(5.3)	7(12.3)	
Ruining their family members' lives	15	37(49.3)	10(13.3)	28(37.3)	0.09
	16	85(61.6)	12(8.7)	41(29.7)	
	17	44(45.4)	10(10.3)	43(44.3)	
	18	49(86.0)	1(1.8)	7(12.3)	
Living happily with the family and neighbours	15	22(29.3)	10(13.3)	43(57.3)	0.38
	16	41(29.7)	14(10.1)	83(60.1)	
	17	31(32.0)	9(9.3)	57(58.8)	
	18	8(14.0)	11(19.3)	38(66.7)	

Disturbing neighbours and making noise, $X^2 = 9.418$, df= 1, p =0.002

Walking unsteadily on the road, $X^2 = 3.98$, df =1, p=0.05

Views on alcohol use and adult behaviour, by gender

Table 5.35 shows the cross-tabulated results of adults' alcohol use behaviour and the participants' gender. Chi-square tests indicate that all but one variable, living happily with their family, all other four variables, walking unsteadily, ruining their family members' lives, fighting with others and disturbing neighbours and making noise were found to be significantly associated with gender, with more females than males recognising this behaviour.

Table 5.35 Cross-tabulations of the perceptions adult behaviours associated with alcohol consumption with participants' gender

Variable	Categories	Agree N(%)	Neutral N(%)	Disagree N(%)	P. value
Fighting with others	Male	98(53.6)	23(12.6)	62(33.9)	0.05*
	Female	124(67.4)	18(9.8)	42(22.8)	
Disturbing neighbours and making noise	Male	91(49.7)	21(11.5)	71(38.8)	0.002*
	Female	125(67.9)	15(8.2)	44(23.9)	
Walking unsteadily	Male	105(57.4)	11(6.0)	67(36.6)	0.02*
	Female	130(70.7)	10(5.4)	44(23.9)	
Ruining their family members' life	Male	90(49.2)	22(12.0)	71(38.8)	0.001*
	Female	125(67.9)	11(6.0)	48(26.1)	
Living happily with the family and neighbours	Male	53(29.0)	25(13.7)	105(57.4)	0.47
	Female	49(26.6)	19(10.3)	116(63.0)	

Fighting with others , $X^2 = 5.99$, df= 2 , p =0.05
Disturbing neighbours and making noise, $X^2 = 12.688$, df= 2, p=0.002
Walking unsteadily, $X^2 = 74.703$, df= 2, p=0.02
Ruining their family members' life, $X^2 = 13.807$, df= 2, p=0.001

5.4.7 Female drinking

Responses to the question 'I have seen a female drinking alcohol' were cross-tabulated by age and tested using the chi-square test for trend. No significant association was found at 5%. As shown in Table 5.36, chi-square test results found a significant association between the statement of 'I have seen a female drinking alcohol' and gender (p=0.02) with more females agreeing with the statement.

Table 5.36 Cross-tabulation of participant seeing female drinking with gender

Variable	Categories	Agree N(%)	Neutral N(%)	Disagree N(%)	P. value
I have seen a female drinking alcohol	Male	94(51.4)	14(7.7)	75(41.0)	0.02*
	Female	107(58.2)	25(13.6)	52(28.3)	

5.4.8 Adolescents views of parental drinking

Chi-square test for trend was used to examine the association between father's and mother's drinking with participant age. No significant association were found at 5%. But results show that almost all the participants disagreed with the statement of their mother drinks alcohol. Only one respondent reported agreement that their mother drinks. Participants had more variable views regarding their fathers drinking.

Table 5.37 Cross-tabulation of the father's drinking and mother's drinking with age

Variable	Categories (Age in years)	Agree N(%)	Neutral N(%)	Disagree N(%)	P. value
My father drinks alcohol	15	20(26.7)	16(21.3)	39(52.0)	0.88
	16	30(21.7)	22(15.9)	86(62.3)	
	17	25(25.8)	17(17.5)	55(56.7)	
	18	19(33.3)	6(10.5)	32(56.1)	
My mother drinks alcohol	15	0(0.0)	0(0.0)	75(100.0)	0.73
	16	1(0.7)	0(0.0)	137(99.3)	
	17	0(0.0)	0(0.0)	97(100.0)	
	18	0(0.0)	0(0.0)	57(100.0)	

Cross-tabulation of participants' gender with father's drinking and mother's drinking found no significant association at 5%.

5.4.9 Parental engagement

Cross-tabulated results of mother and father's monitoring

Mother's and father's monitoring were cross-tabulated with participants' age. Chi-square test for trend results only shows the marginally significant association between 'father knows how I spend money' and participant age (p=0.05), and for all other three variables, there is no significant association at 5% with participant age.

As shown in Table 5.38, chi-square test results found a significant association with two statements of mother's monitoring 'my mother knows who my friends are' (p=0.002) and 'my mother knows how I spend my pocket money' (p=0.025) with the female gender.

In contrast, neither of these statements showed no significant relationship with age at 5% when applied to fathers.

Table 5.38 Cross-tabulation of parental monitoring and gender

Variable	Categories	Agree N(%)	Neutral N(%)	Disagree N(%)	P. value
My mother knows who my friends are.	Male	164(89.6)	13(7.1)	6(3.3)	0.002
	Female	181(98.4)	2(1.1)	1(0.5)	
My father knows who my friends are.	Male	144(78.7)	23(12.6)	16(8.7)	0.17
	Female	157(85.3)	19(10/3)	8(4.3)	
My mother knows how I spend my pocket money	Male	145(79.2)	17(9.3)	21(11.5)	0.03
	Female	163(88.6)	13(7.1)	8(4.3)	
My father knows how I spend my pocket money	Male	135(73.8)	24(13.1)	24(13..1)	0.15
	Female	151(82.1)	18(9.8)	15(8.2)	

My mother knows who my friends are $.X^2 = 12.473$, df= 2, p=0.002
My mother knows how I spend my pocket money $X^2 = 7.4102$, df= 2, p =0.03

Cross-tabulation of parental controlling variables with participants' age and gender

Table 5.39 shows that using chi-square tests for trend that parents' control on spending pocket money showed a significant association with the participants' age (my mother decides how I spend my pocket money p=0.003, my father decides how I spend my pocket money 0.016), with younger respondents agreeing that this was the case.

Table 5.39 Cross-tabulation of parents' controlling with participants' age

Variable	Categories (Age in years)	Agree N(%)	Neutral N(%)	Disagree N(%)	P. value
My mother decides which friends I spend time with	15	48(64.0)	7(9.3)	20(26.7)	0.34
	16	61(44.2)	27(19.6)	50(36.2)	
	17	34(35.1)	23(23.7)	40(41.2)	
	18	29(50.9)	10(17.5)	18(31.6)	
My father decides which friends I spend time with	15	43(57.3)	11(14.7)	21(28.0)	0.17
	16	56(40.6)	33(23.9)	49(35.5)	
	17	32(33.0)	20(20.6)	45(46.4)	
	18	28(49.1)	10(17.5)	19(33.4)	
My mother decides how I spend my pocket money	15	48(64.0)	14(18.7)	13(17.3)	0.003*
	16	60(43.5)	33(23.9)	45(32.6)	
	17	45(46.4)	18(18.6)	34(35.1)	
	18	18(31.6)	15(26.3)	24(42.1)	
My father decides how I spend my pocket money	15	41(54.7)	18(24.0)	16(21.3)	0.02*
	16	54(39.1)	35(25.4)	49(35.5)	
	17	38(39.2)	21(21.6)	38(39.2)	
	18	19(33.3)	15(26.3)	23(40.4)	

My father decides which friends I spend time with, $X^2 = 1.88$, df= 1, p=0.17
My mother decides how I spend my pocket money, $X^2 = 8.954$, df= 1, p=0.003
My father decides how I spend my pocket money, $X^2 = 5.760$, df= 1, p=0.02

Parental controlling variables and participants' gender were cross-tabulated. The chi-square testing found no significant association at 5% with either mother's or father's control with gender.

Cross-tabulation of parental communication variables with participants' age and gender

Parents' communication variables were cross-tabulated with participant age. Cross-tabulation and the chi-square test of trend showed that none of the four variables used for parental communication and participants' age had significant association at 5%.

Parental communication with gender

Table 5.40 shows the cross-tabulated results of parental communication variables with gender Chi-square tests were performed and only one statement, 'my mother and I discuss the media portrayal of alcohol freely' was found to be significantly associated with gender (p=0.023).

Table 5.40 Cross-tabulation of parents' communication with participants' age

Variable	Categories	Agree N(%)	Neutral N(%)	Disagree N(%)	P. value
My mother and I discuss the media portrayal of alcohol freely	Male	75(41.0)	28(15.3)	80(43.7)	0.02*
	Female	101(54.9)	18(9.8)	65(35.3)	
My father and I discuss the media portrayal of alcohol freely	Male	73(39.9)	29(15.8)	81(44.3)	0.34
	Female	86(46.7)	22(12.0)	76(41.3)	
My mother and I are interested in each others' opinion regarding alcohol use	Male	98(53.6)	25(13.7)	60(32.8)	0.41
	Female	97(52.7)	34(18.5)	53(28.8)	
My father and I are interested in each others' opinion regarding alcohol use	Male	95(51.9)	27(14.8)	61(33.3)	0.11
	Female	81(44.0)	42(22.8)	61(33.2)	

Mother discusses media portrayal of alcohol, $X^2 = 7.564$, df=2, p=0.02

5.4.10 Individual parental engagement variables and the decision to drink alcohol

Cross-tabulation of parental engagement and the outcome variable, 'I have drunk alcohol myself'.

Tables 5.41, 5.42, 5.43 show the cross-tabulation of this important outcome variable with measures of parental monitoring, controlling and communication respectively. According to the cross-tabulated results in Table 5.41, all four statement regarding mother's and father's monitoring showed a statistically significant result at 5%.

As shown in Table 5.42, only one statement regarding mother's controlling ('my mother decides how I spend my pocket money') has significant association and all other parental controlling items have no statistically significant relationships at 5%. Cross-tabulation results of parental communication items with the outcome variable, 'I have drunk alcohol myself' showed a statistically significant relationship with only one variable 'my father and I discuss the media portrayal of alcohol freely'. Other parental communication variables did not show any statistically significant results at 5% (Table 5.43).

Table 5.41 Cross-tabulation of parental monitoring items and the outcome variable 'I have drunk alcohol myself'.

Variables	'I have drunk alcohol myself'				
	Categories	**Agree N (%)**	**Neutral N(%)**	**Disagree N(%)**	**P. value**
My mother knows who my friends are.	Agree N(%)	18 (5.2)	5(1.4)	322 (93.3)	<0.001*
	Neutral N(%)	1(6.7)	1(6.7)	13 (86.7)	
	Disagree N(%)	1(12.3)	2(28.6)	4(57.1)	
My father knows who my friends are.	Agree N(%)	11(3.7)	3(1.0)	287(95.3)	<0.001*
	Neutral N(%)	4(9.5)	4(9.5)	34(81.0)	
	Disagree N(%)	5(20.8)	1(4.2)	18(75.0)	
My mother knows how I spend my pocket money	Agree N(%)	12(3.9)	5(1.6)	291(94.5)	0.01*
	Neutral N(%)	4(13.3)	2(6.7)	24(80.0)	
	Disagree N(%)	4(13.8)	1(3.4)	24(82.8)	
My father knows how I spend my pocket money	Agree N(%)	9(3.1)	5(1.7)	272(95.1)	0.01*
	Neutral N(%)	6(14.3)	1(2.4)	35(83.3)	
	Disagree N(%)	5(12.8)	2(5.1)	32(82.1)	

Table 5.42 Cross-tabulation of parental controlling measures and the outcome variable, 'I have drunk alcohol myself'

Variable	'I have drunk alcohol myself'				
	Categories	**Agree N(%)**	**Neutral N(%)**	**Disagree N(%)**	**P. value**
My mother decides which friends I spend time with	Agree N(%)	9(5.2)	3(1.7)	160(93.0)	0.88
	Neutral N(%)	3(4.5)	1(1.5)	63(94.0)	
	Disagree N(%)	8(6.3)	4(3.1)	116(90.6)	
My father decides which friends I spend time with	Agree N(%)	7(4.4)	2(1.3)	150(94.3)	0.74
	Neutral N(%)	4(5.4)	2(2.7)	68(91.9)	
	Disagree N(%)	9(6.7)	4(3.0)	121(90.3)	
My mother decides how I spend my pocket money	Agree N(%)	3(1.8)	1(0.6)	167(97.7)	0.01*
	Neutral N(%)	4(5.0)	3(3.8)	73(91.3)	
	Disagree N(%)	13(11.2)	4(3.4)	99(85.3)	
My father decides how I spend my pocket money	Agree N(%)	5(3.3)	1(0.7)	146(96.1)	0.14
	Neutral N(%)	5(5.6)	4(4.5)	80(89.9)	
	Disagree N(%)	10(7.9)	3(2.4)	113(89.7)	

Table 5.43 Cross-tabulation of parental communication measures and the outcome variable, 'I have drunk alcohol by myself'

Variable	'I have drunk alcohol myself'				
	Categories	**Agree N(%)**	**Neutral N(%)**	**Disagree N(%)**	**P. value**
My mother and I discuss the media portrayal of alcohol freely	Agree N(%)	10(5.7)	2(1.1)	164(93.2)	0.06
	Neutral N(%)	5(10.9)	3(6.5)	38(82.6)	
	Disagree N(%)	5(3.4)	3(2.1)	137(94.5)	
My father and I discuss the media portrayal of alcohol freely	Agree N(%)	9(5.7)	1(0.6)	149(93.7)	0.01*
	Neutral N(%)	5(9.8)	4(7.8)	42(82.4)	
	Disagree N(%)	6(3.8)	3(1.9)	148(94.3)	
My mother and I are interested in each others' opinion regarding alcohol use	Agree	11(5.6)	1(0.5)	183(93.8)	0.20
	Neutral N(%)	4(6.8)	2(3.4)	53(89.8)	
	Disagree N(%)	5(4.4)	5(4.4)	103(91.2)	
My father and I are interested in each others' opinion regarding alcohol use	Agree N(%)	8(4.5)	3(1.7)	165(93.8)	0.79
	Neutral N(%)	4(5.8)	1(1.4)	64(92.8)	
	Disagree N(%)	8(6.6)	4(3.3)	110(90.2)	

Cross-tabulation of parental engagement and the outcome variable, 'It is OK to drink alcohol under 21 years of age'.

Tables 5.44, 5.45, 5.46 show the cross-tabulation of outcome variable 'it is OK to drink alcohol under 21 years of age'. As shown in Table 5.44, there is no statistically significant relationship at 5% on any of the four parental monitoring variables. Moreover, cross- tabulation results of parental controlling variables with the outcome variable, 'it is OK to drink alcohol under 21 years of age' also have no statistically significant relationship at 5% (Table 5.45). The parental

communication variable regarding mother's and father's communication 'my mother and I discuss the media portrayal of alcohol freely' and my father and I discuss the media portrayal of alcohol freely' have statistically significant association at 5%. The other two parental communication variables have no statistically significant relationships at 5% (Table 5.46).

Table 5.44 Cross-tabulation of parental monitoring items and the outcome variable 'It is ok to drink under 21 years of age'.

Variable	'It is ok to drink alcohol under 21 years of age'				
	Categories	**Agree N(%)**	**Neutral N(%)**	**Disagree N(%)**	**P-value**
My mother knows who my friends are.	Agree N(%)	12 (3.5)	19(5.5)	314(91.0)	0.87
	Neutral N(%)	0(0.0)	1(6.7)	14(93.3)	
	Disagree N(%)	0(0.0)	0(0.0)	7(100.0)	
My father knows who my friends are.	Agree N(%)	10 (3.3)	17(5.6)	274(91.0)	0.58
	Neutral N(%)	2(4.8)	3(7.1)	37(88.1)	
	Disagree N(%)	0(0.0)	0(0.0)	24(100.0)	
My mother knows how I spend my pocket money	Agree N(%)	11 (3.6)	14(4.5)	283(91.9)	0.41
	Neutral N(%)	1(3.3)	3(10.0)	26(86.7)	
	Disagree N(%)	0(0.0)	3(10.3)	26(89.7)	
My father knows how I spend my pocket money	Agree N(%)	9 (3.1)	13(4.5)	264(92.3)	0.63
	Neutral N(%)	2(4.8)	4(9.5)	36(85.7)	
	Disagree N(%)	1(2.6)	3(.7.7)	35(89.7)	

Table 5.45 Cross-tabulation of parental controlling items and the outcome variable 'It is ok to drink under 21 years of age'.

Variable	'It is ok to drink alcohol under 21 years of age'				
	Categories	**Agree N(%)**	**Neutral N(%)**	**Disagree N(%)**	**P. value**
My mother decides which friends I spend time with	Agree N(%)	6 (3.5)	9(5.2)	157(91.3)	
	Neutral N(%)	2(3.0)	3(4.5)	62(92.5)	
	Disagree N(%)	4(3.1)	8(6.3)	116(90.6)	0.99
My father decides which friends I spend time with	Agree N(%)	5 (3.1)	8(5.0)	146(91.8)	
	Neutral N(%)	3(4.1)	4(5.4)	67(90.5)	
	Disagree N(%)	4(3.0)	8(6.0)	122(91.0)	0.99
My mother decides how I spend my pocket money	Agree N(%)	5 (2.9)	5(2.9)	161(94.2)	
	Neutral N(%)	4(5.0)	7(8.8)	69(86.3)	
	Disagree N(%)	3(2.6)	8(6.9)	105(90.5)	0.25
My father decides how I spend my pocket money	Agree N(%)	5 (3.3)	6(3.9)	141(92.8)	
	Neutral N(%)	4(4.5)	7(7.9)	78(87.6)	
	Disagree N(%)	3(2.4)	7(5.6)	116(92.1)	0.65

Table 5.46 Cross-tabulation of parental communication items and the outcome variable 'It is ok to drink under 21 years of age'.

Variable	'It is ok to drink alcohol under 21 years of age'				
	Categories	**Agree N(%)**	**Neutral N(%)**	**Disagree N(%)**	**P. value**
My mother and I discuss the media portrayal of alcohol freely	Agree N(%)	2 (1.1)	5(2.8)	169(96.0)	0.01*
	Neutral N(%)	4(8.7)	6(13.0)	36(78.3)	
	Disagree N(%)	6(4.1.)	9(6.2)	130(89.7)	
My father and I discuss the media portrayal of alcohol freely	Agree N(%)	3 (1.9)	5(3.1)	151(95.0)	0.04
	Neutral N(%)	2(3.9)	7(13.7)	42(82.4)	
	Disagree N(%)	7(4.5)	8(5.1)	142(90.4)	
My mother and I are interested in each others' opinion regarding alcohol use	Agree N(%)	5 (2.6)	9(4.6)	181(92.8)	0.39
	Neutral N(%)	3(5.1)	6(10.2)	50(84.7)	
	Disagree N(%)	4(3.5)	5(4.4)	104(92.0)	
My father and I are interested in each others' opinion regarding alcohol use	Agree N(%)	4 (3.3)	10(5.7)	162(92.0)	0.58
	Neutral N(%)	4(5.8)	5(7.2)	60(87,0)	
	Disagree N(%)	4(3.3)	5(4.1)	113(92.6)	

5.5 Summary

The profile of the participants showed that the largest age group in the survey was 16 year olds (38%). Regarding birth position, 53% of participants' family birth position was 1 and 32% represented the family birth position 2. Forty-eight percent of respondents reported that they have one sibling in the family and 32% reported that they have two. A majority of both fathers and mothers have passed either the Advanced Level exam or the Ordinary Level exam.

According to participants' views on and experience of alcohol use, a higher proportion of respondents (87%) reported that they do not agree with drinking when under 21 years. A total of 91% participants disagreed that they have drunk alcohol and only 5% agree that they have drunk

alcohol. Although very few participants agreed that they have drunk alcohol, a considerable proportion (71%) agreed that they had seen other people under 21 years of age drinking. The results showed that a majority of participants (77%) drink alcohol to have fun whereas 71% reported that young people drink for sadness and depression. Further, 82.7% of participants disagreed that their friends invited them to drink.

According to the results of community-based questions, a majority of participants (76%) responded that they agreed weak government regulations were responsible for young people's drinking. Participants had different experiences of adults' alcohol behaviour in the community. Over 50% reported that they agreed that they had experienced or see the behaviour of fighting with others, disturbing neighbours and making noise, walking unsteadily on the road, and ruining their family members' life. On the other hand, over 50% participants reported that they disagreed that a happy life with their families is associated with adult drinking.

Adolescent views on responsibility for adolescent access to alcohol showed that few participants (2%) agreed that they can obtain alcohol from their parents' home while 79% reported that they disagreed that young people can access alcohol from there. Although it is illegal to sell alcohol to people under 21 years of age, 28% of participants responded that young people can obtain alcohol from legal places. On the other hand, more participants, (53%) reported that young people can obtain alcohol from illegal places. Moreover, 45% participants agreed that young people under 21 years of age can obtain alcohol from their friends.

Although 22% of respondents agreed that their fathers drink alcohol, results also showed that there were varied understandings of their fathers' drinking. However, there are more consistent views about mother's drinking, a small minority, (1%) agreed that their mothers drink alcohol with the majority of participants, (87%) disagreeing that their mothers drink alcohol.

There was a question targeting whether adolescents can drink alcohol in their own homes. Importantly, only 01% agreed that they are allowed to have alcohol at their home and almost all the participants, (97%) answered that they are not allowed to have alcohol at home. The question regarding parents' views on adolescents' alcohol consumption showed very little difference in the pattern of responses between fathers and mothers, with 92% of both fathers and mothers disagreeing that adolescents should drink alcohol.

Chapter 6 Discussion

6.1 Introduction

The overall aims of this thesis were to contribute to the understanding of adolescent alcohol use in Sri Lanka and the role of parental engagement in responding to alcohol related behaviour. To achieve these aims the research objectives focused on identifying the patterns of and attitudes to alcohol consumption among Sri Lankan adolescents, determining how selected national and local environmental factors are related to adolescent alcohol consumption and establishing the relationship between parental engagement and adolescent attitudes to alcohol use. These aims and objectives were addressed through a mixed-methods study with two components: focus group interviews and a cross-sectional survey of high school students. This chapter discusses the results of the investigation and their implications for Sri Lankan alcohol strategies and future research.

Section 6.2 provides a brief overview of the findings from both the focus group study and the cross-sectional survey. Section 6.3 then discusses these results under three broad headings related to the thesis objectives: adolescent attitudes and experience of alcohol (6.3.1); local and national environmental influences (6.3.2); and parental engagement (6.3.3). The discussion in these sections includes findings from both studies, their consistency with other reported research and how these can be interpreted in Sri Lanka. The discussion also includes reference to how the findings fit in with a general public health model (Whitehead et al., 2001), local insights (Sorensen et al, (2014) and social models of behaviour (Bronfenbrenner, 1994) discussed in previous chapters. This section (6.3.4) also highlights some unexpected findings. The limitations of the study are discussed (6.4) with indications of the implications and contributions of this research and recommendations for future research, policy and practice in Sri Lanka (6.5-6.7).

6.2 Overview of Results

The research included both qualitative (focus group interviews) and quantitative components (a cross-sectional survey) and this section briefly presents the main findings of each study. As Fraga et al. (2011) noted, a combination of both quantitative and qualitative research is appropriate for understanding adolescent behaviour, with mixed methods research providing opportunities for the same topic to be addressed in different ways or for one method to challenge or reinforce the findings of another. In this research, the focus group findings directly influenced questions in the cross-sectional survey, particularly in relation to the environmental context for drinking. This permitted focused and detailed information to be sought on adolescent perceptions and practices of premature alcohol usage that would not otherwise be possible to obtain.

Focus groups

The purpose of the four focus groups was to gain insight into previously un-researched issues: Sri Lankan adolescents' attitudes and their response to alcohol related matters, and their views on parental engagement and other factors associated with adolescent alcohol consumption. The findings from the focus group interviews revealed three main categories (or themes): alcohol and adolescents; adolescent-parent relationship in relation to alcohol; and alcohol and society.

The *Alcohol and adolescent* category included five subcategories: adolescent motivation to drink alcohol; how adolescents access alcohol; peer influence in adolescents alcohol use: the personal consequences of drinking; and solutions to reduce minors drinking. Findings showed that adolescents understand the negative effects of alcohol drinking, the legal and illegal places where they can buy alcohol, corrupt and ineffective law enforcement agencies and how the political influence of the alcohol industry affects the country.

The second category, *Alcohol and parental relationships* identified six subcategories: family rules regarding alcohol use, parental communication regarding adolescent alcohol use, parental monitoring regarding adolescent alcohol use, parental controlling regarding adolescents alcohol use, influence of parental alcohol use, parental knowledge about adolescents alcohol use and parents' selection of friends.

Findings in this category showed that adolescents have a clear understanding of the difficulties some families had in dealing with alcohol, the maternal role and the efforts of mothers to prevent adolescents from using alcohol. In addition, findings in this category revealed that parents use a variety of parenting approaches in everyday life but do not communicate with their children about alcohol unless they are responding to some negative incidents in the area.

The third category, *Alcohol and society,* included four subcategories: alcohol use and gender differences in the country; adult alcohol behaviour in Sri Lanka; the legal age limit and adolescents' alcohol use; and media influence on adolescent drinking. In this category, adolescents commented on their experiences of adult drinking behaviour in Sri Lanka and their perceptions of alcohol use in society.

The cross-sectional survey

The analyses of data from 549 respondents are reported under broad headings: adolescent views on and experiences of alcohol use; adolescent views on circumstances influencing their drinking and perceived community impacts from alcohol; and parental engagement with adolescents in relation to alcohol. This research was conducted with male (51%) and female (49%) participants aged 15-18. The questionnaire included questions regarding participants, demographic variables, parent engagement and adolescent behaviour, and the community and alcohol. Frequencies and cross-tabulations were reported on designated outcome measures and parental engagement variables. In this chapter, levels of agreement and disagreement are reported in summary form (agree/strongly agree = agree; disagree/strongly disagree = disagree) unless otherwise specified.

In terms of adolescents' experience of alcohol, 5% of participants reported consuming alcohol, 4% indicated that it was OK to drink alcohol under 21 years of age and a considerable proportion (71%) reported seeing others under 21 drinking. Overall, results generally showed increasing trends of agreement and disagreement over the age from 15-18 and some gender differences in associations.

Specifically in relation to the statement: 'it is ok to drink under 21 years of age', younger respondents were more likely than older respondents to report their disagreement. Younger

respondents were statistically more likely than older respondents (15 year olds: 96%; 18 year olds: 82.5%) to report that they disagreed with the statement of 'I have drunk alcohol' (p=0.002). Similarly, younger respondents were statistically more likely than older ones to report disagreement in response to the statement 'my friends invite me to drink' (p=<0.01) or that they had seen others drinking under 21 years of age (p=0.02).

With respect to the relationship between gender and participants' responses regarding young people's drinking under 21 years of age, participants' own alcohol consumption and whether participants had seen others under 21 years of age drink alcohol showed a statistically significant relationship. Female respondents were more likely than male respondents to report that they disagreed with the statement 'It is ok to drink alcohol under 21 years of age' (p=0.02) and to have reported that they had drunk themselves (p=0.002). According to the results, female respondents were statistically more likely than male respondents to report that they disagreed with the statement of 'my friends invite me to drink alcohol' (p=<.001).

There were six variables in the questionnaire to investigate the reason why young people drink alcohol. Within the exception of the reason 'to rebel against the adults around them,' all the other reasons, 'to have fun', 'for sadness and depression', 'to feel better about themselves', 'to fit in with friends' and 'to find solutions for their problems' showed statistically significant trends of agreement by age from 15 to 18 years. All these variables, including 'to rebel against the adults around them', also showed statistically significant associations with gender, with females more likely to agree with these reasons for drinking. There was also a statistically significant association between female gender and reported agreement that adults' negative behaviour was associated with alcohol consumption.

Three parental engagement components, parental monitoring, controlling and communication were used in this research to establish the relationship between parental engagement and adolescents. With respect to monitoring, only one of the fours monitoring variables 'father knows how I spend money' showed a marginally statistically significant association with participants' age. Cross-tabulated results of monitoring with gender showed a significant relationship only with the two maternal variables.

With respect to parental control, both maternal (p=.003) and paternal (p=.02) variables indicating parental control on spending pocket money showed a statistically significant association with participant age, with younger respondents agreeing that this was the case. There was no statistically significant association between any of the four parental controlling variables and gender.

Cross-tabulated results showed that none of the four variables used for parental communication had a statistically significant association with participants' age. Only one communication variable 'my mother and I discuss the media portrayal of alcohol' showed a significant association with (female) gender (p=.02).

Parental engagement variables were cross-tabulated with two outcomes variables, 'I have drunk alcohol myself' and 'it is ok to drink alcohol under 21 years of age'. All four statements regarding mother's and father's monitoring showed a statistically significant association at 5% with the outcome variable 'I have drunk alcohol myself'. Only one statement regarding mother's controlling ('my mother decides how I spend my pocket money') had a statistically significant association with 'I have drunk alcohol myself' and all other parental controlling items have no statistically significant relationships at 5%. With respect to communication variables, only one variable 'my father and I discuss the media portrayal of alcohol freely' showed a statistically significant relationship with outcome variable 'I have drunk alcohol myself'.

For the outcome variable 'it is ok to drink alcohol under 21 years of age', cross-tabulation with parental monitoring and parental controlling variables indicated no statistically significant relationships at 5%. Two of the communication variables, 'my mother and I discuss the media portrayal of alcohol freely' and 'my father and I discuss the media portrayal of alcohol freely' have a statistically significant association at 5% with the outcome variable 'it is ok to drink alcohol under 21 years of age'. The other two parental communication variables have no statistically significant relationships at 5%.

6.3 Discussion of findings

6.3.1 Adolescents attitudes to and experience of alcohol

In the cross-sectional survey, only a small proportion of respondents agreed that people under 21 years of age (the legal age) should drink alcohol (4%) and agreed that they had drunk alcohol themselves (5%). Despite this, a high proportion (71%) agreed that they had seen other people under 21 years old drinking. This is consistent with the reports from focus group participants who provided knowledgeable details of adolescent drinking.

Older respondents were more likely to report alcohol use and exposure to alcohol through seeing others drink. Both variables showed statistically significant associations with age from 15 to 18 years. These findings were consistent with the findings from the international literature (Andrews, Hampson, and Peterson (2011). Andrews et al. (2011) noted that over the period from early adolescence alcohol use has increased in mid-adolescence, with social images and peers influence important.

According to Thalagala et al. (2004), the Sri Lankan adolescent male and female current alcohol use at the time of their study were 6% and 1% respectively. In this research, 8.7% of males agreed that they had drunk alcohol compared with 2.2% of females. Therefore, while the findings appear similar to Thalagala et al. (2004) in fact this may not be the case. Thalagala et al. surveyed both rural and urban populations and reported current drinking, whereas this PhD study covered only urban adolescents but asked about any previous drinking. There are, however, varying views on the current alcohol use of young people in Sri Lanka. The Sri Lankan National Human Development Report (2014) stated that the current alcohol consumption of young people aged between 15 to 24 year is 26.7% whereas Somatunga et al. (2014), reporting on the same age range indicated current alcohol use in the same age group was 14.5% for males and 1% for females.

Reasons why adolescents drink alcohol

The first indications of the reasons why adolescents drink came from the focus groups where participants reported that their age group uses alcohol for fun, to fit in with their friends, and to deal with sadness and stress. In the cross-sectional survey, of the six suggested reasons why adolescents' drink alcohol, the five that were reported at the highest levels (more than 60% of respondents agreeing) were: 'to have fun' (77%); 'for sadness and depression' (71%) and 'to feel better' (63%). Only a small majority of participants reported that young people use alcohol to fit in with friends (57%) and fewer (39%) responded that young people drink alcohol to find solutions for their problems. The lowest level of reported reasons for drinking was 'to rebel against the adults around them' (32%).

The current research findings are similar to those from previous international research into 'why young people drink alcohol'. For example, da Silva and Padilha (2011) in their Brazilian study reported that respondents expressed only modest agreement (57%) that adolescents drink 'to fit in with friends' but also that adolescents drink alcohol as a solution to their problems. Janssen et al. (2014) reported from their focus groups in the Netherlands that adolescents drink alcohol to have fun.

The Sri Lankan National Human Development Report (2014) reported that most young people in Sri Lanka use alcohol to be with friends and enjoy themselves It can also be noted that the findings of the current study are consistent with those of Perera and Torabi (2009). Perera and Torabi (2009) found that in Sri Lanka three factors; social pressure, tension reduction and personal enjoyment motivate 16-30 year old males to drink alcohol. Although the age group samples included in the current study and the Perera and Torabi (2009) study are different, findings of both studies showed that tension reduction was an important motivation for drinking for young people. In the current study, there was a statistically significant correlation between increasing support for the reasons for drinking and increasing age from 15-18, indicating alignment with Perera and Torabi (2009).

According to the findings in the current research and Perera and Torabi (2009), young Sri Lankan people drink alcohol to reduce negative mental problems. Therefore, understanding the mental health of young Sri Lankans is important as this may reflect the impact on the population

of three decades of civil war. During the conflict, the public health and the social and economic systems were disrupted. Although some areas were not seriously affected, the negative impact of the war has affected all ages, both male and female, people from all socio-demographic backgrounds, religion and ethnic groups in the country (Wickramage & Siriwardhana, 2014). Therefore, the link between alcohol consumption and the mental health situation in young people may be part of the response to the negative impact of conflict on all aspects of Sri Lankan life (Siriwardhana et al., 2012).

Peer influence on adolescent alcohol use

The influence of friends and peers on alcohol use was mentioned in the previous section as a reason to drink but was reported as of lesser importance than some other reasons. There is, however, a significant international literature that attests to the importance of peers/friends in adolescent drinking and engaging in other risky behaviours (Bray et al., 2003; da Silva & Padilha, 2011; Janssen et al., 2014; Trucco et al., 2011).

The focus group participants in this study also attached importance to friends/peers. Participants explained clearly how friends introduce alcohol to others. If somebody refuses alcohol in a friendship setting, they are likely to feel isolated within the group, therefore, they 'go along' with their friends. Findings were also clear that, although participants understand the negative effects of drinking, they drink because they want to fit well into the friendship group. As adolescents grow, they spend time more with their friends and therefore friends influence them to drink alcohol. These findings are illuminated by those of Nash et al. (2005) who, in a longitudinal study, reported on the impact of peer influence on potentially negative alcohol use.

Another clear finding from focus group interview data was that the peer group can be a major training ground for risky behaviour and alcohol use. The findings of this study support the literature review by Trucco et al. (2011) who noted that peers are thought to supply adolescents with the attitudes, motivations, and rationalisation to drink alcohol. Similar views regarding peer influence were highlighted by Bray et al. (2003) in their research. They noted that higher initial peer alcohol use was related to larger later increases in adolescents use.

In contrast, research findings from the cross-sectional survey show mixed responses to measures of peer influence on key variables such as being invited to drink by friends, accessing alcohol

from friends, and drinking to 'fit in' with friends. Only 9.3% of respondents indicated that their friends had invited them to drink, but despite this 45% agreed that it was possible to access alcohol from friends, and 57% agreed that young people drink to 'fit in with friends and peers'. Despite these varying levels of responses, there were some statistically significant associations with age. Younger participants were significantly more likely to disagree that their friends had invited them to drink and that they drank to fit in with friends and peers. With respect to gender, there is a statistically significant difference between male and female responses on the three 'friendship' variables, with fewer females reporting that friends would invite them to drink, that fitting in with friends is a reason for drinking and that they have access to alcohol via friends.

Another Sri Lankan study, although not in relation to alcohol, has addressed Sri Lankan adolescents' relationships with peers, along with their parents and siblings (Pathirana, 2016). This study indicated that friends and peer relationships were associated with adolescents' psychosocial well-being. This study also sampled adolescents aged between 15 to 18 years (Pathirana, 2016).

Findings of a comparative study by Kabir and Goh (2014) in Sri Lanka and Nepal to understand tobacco use behaviour of adolescents are consistent with those of this study. In a cross-sectional survey Kabir and Goh (2014) found that friends' tobacco use behaviour is a predictor of adolescent usage and suggested that when friends use tobacco in front of other adolescents, mechanisms may include imitation, peer pressure and group characteristics. Although, this research concerns tobacco use behaviour, the focus group discussion in the current study included findings related to peer pressure, imitation and group characteristics and the insights of Kabir and Goh (2014) in relation to intervention.

Regardless of the actual impact of friends and peers and the mechanisms in place, it was clear from the focus group interviews in this study that participants reported that parents had a strong view that friends are influential on the decision to drink and therefore parents advise them in selecting friends and particularly urging their adolescents not to associate friends who exhibit 'delinquent' behaviour or who drink alcohol.

6.3.2 The local and national environment

Alcohol availability and regulation

According to the WHO (2014), illicit alcohol consumption in the world accounts for nearly a quarter of world alcohol consumption. Illegally produced alcohol is less costly than legal production and is consumed largely by people of lower social and economic status (WHO, 2014). The focus group findings clearly showed that there is illegal production, sale, and consumption in Sri Lanka. In the focus groups, participants talked freely about their opportunities to access alcohol from both legal and illegal places. There were two types of sources of alcohol for purchase: licensed sellers who sell alcohol illegally to minors and unlicensed places where alcohol was sold illegally, without a license. Focus group findings supported the previous reports of Hettige and Paranagama (2005) which noted that if illicit liquor is taken into account a high unrecorded alcohol consumption from illicit sources may double official levels of alcohol consumption in Sri Lanka. Somatunga et al. (2014), Sorensen et al. (2014) and Perera and Torabi (2009) also emphasised the illegal consumption of alcohol in Sri Lanka.

When asked in the survey about sources of alcohol, respondents indicated agreement that illegal sources (53%) and friends (45%) provided the greatest availability. Access could also be supplied by neighbours (28%) and through legal outlets (28%). Only 2% reported their parents' home as a source. In the focus groups, it was indicated that 'legal' buyers could supply young people and it is possible that this group includes 'neighbours, themselves buying legally', although in the focus groups it was also noted that being supplied directly from 'legal' outlets is not unknown.

As older adolescents are inevitably more exposed to society than younger ones, higher proportions of older respondents reported that they agreed that alcohol could be obtained from illegal places. There was, however, a statistically significant association for friends, neighbours and illegal places with gender, with females more likely ($p=<0.01$ for all three relationships) to agree that these 'unauthorised' sources could be used to obtain alcohol.

This high level of access and any adolescent use, according to respondents, can be attributed to the regulatory environment, including weak government regulations (67% agreeing) and poor

law enforcement (72%). The first finding in relation to government regulations cannot, on inspection, be sustained. Adolescents appear to have flawed knowledge about Sri Lankan laws in relation to alcohol. As described in previous chapters, under the NATA Act of 2006, the Sri Lankan government introduced very strong laws in terms of alcohol selling, producing and buying. Therefore the results of this study suggest that adolescents did not have an accurate understanding or awareness of the strength of the statute. On the other hand, adolescents seemed to have a good appreciation of the poor levels of enforcement in the country. Regulatory policies, as already noted in chapter 1, are ineffective in a country like Sri Lanka where bribery and corruption are associated with the liquor industry. Research conducted Hettige and Paranagama (2005) and Perera and Torabi (2009) in Sri Lanka emphasised the illegal consumption of alcohol in the country, but until this study little was known of how, where and how readily adolescents had been sourcing alcohol.

The low level of access to alcohol for adolescents from their parents is supported by other studies. Hettige and Paranagama (2005) indicated that drinking is not common in teenagers as parental care is high and culturally teenagers are not used to drinking in the presence of their parents or respected elders, even at a party. Pathirana (2016) and Rishani et al. (2015) have also indicated that family have a strong influence on the healthy development of adolescents. The relatively low levels of consumption reported in adolescents in the current study may be explained by family dynamics that deter use. In turn, this suggests the need for a deeper understanding of parent-child relationships with respect to alcohol. This may have important implications for policy, as discussed later.

Adult drinking behaviour

The focus group discussions demonstrated that adolescents had views on adult drinking and behaviour. There were many comments regarding the negative impacts of drunken behaviour in society. A majority of participants had experience of adults' negative behaviour, and how these behaviours ruined relationships with family members and neighbours and led to violence. Participants also explained that people who have shown such behaviours are rejected by society. Further, the participants in focus groups noted that neighbours do not worry about excessive drinking as long as it does not disturb others.

Four of the five possible behavioural outcomes from adult alcohol use, listed in the survey questionnaire, were negative, with a majority of respondents agreeing at levels around 57-60% that disturbing neighbours and making noise, walking unsteadily on the road, ruining their family members' lives were associated with alcohol consumption. It is possible that as adolescents get older they may have more insights into the realities of alcohol in society, or as Coleman and Carter (2007) discovered, may even be deterred from drinking by seeing others drunk. All the negative behaviours also had a significant association with gender, indicating that females, in particular, recognise the links between alcohol and negative social outcome.

Alcohol use, gender and the family

There are two aspects to alcohol use and gender, and the ways this is perceived by adolescents. The first is the levels and pattern of consumption by gender; the second is in relation to gender roles and alcohol, including in a family setting. The reported differences in male and female drinking in Sri Lanka have already been noted (Somatunga et al., 2014; Sorensen et al., 2014), with drinking among males well accepted and female drinking regarded as largely unacceptable. Although habitual female drinking does not exist in Sri Lanka, some females drink alcohol at social events. Female drinking is a recent phenomenon confined to some social settings (Hettige & Paranagama, 2005). A minority of survey participants (22%) agreed that their father drinks alcohol. This finding is lower than that from other studies with Katulanda et al. (2014), reporting a prevalence of alcohol use between 37.7% and 52.5% among men. A further 17% of survey respondents reported a neutral (neither agreed nor disagreed) assessment that their father drank. This may represent under-reporting possibly because participants hesitated to report their fathers' drinking, or that they were genuinely uncertain if their fathers did not drink in the presence of the family.

While male drinking is clearly recognised in Sri Lanka, the current survey reported that over half of the participants (55%) have seen a female drinking. However, only three participants (less than one percent) reported that their mothers drink alcohol. These are slightly below the levels reported by Katulanda et al. (2014) who reported that the prevalence of alcohol use ranged between 1.6-5.0% in women, although it needs to be acknowledged that this cross-sectional survey of adolescent opinion cannot be comparable to a community prevalence study. The

disparity between fathers' and mothers' drinking in this study, however, confirms the pattern overall in Sri Lanka in relation to male/female alcohol consumption.

The focus group interviews reported gender-related situations in relation to alcohol. The focus group findings suggested that in general mothers have the responsibility for providing a peaceful environment so that their children can avoid any disturbance from their fathers' drinking. Again, it confirmed that in Sri Lanka male drinking operates in a more permissive environment than for (Hettige & Paranagama, 2005; Perera & Torabi, 2009). Both survey and focus group findings confirmed that Sri Lankan parents do not encourage adolescent alcohol use. It was interesting that despite the gender difference in relation to alcohol use, findings showed that both mothers and fathers were reported in the survey to have a restrictive view about whether adolescents should drink. As already noted, only 2% of respondents reported that they can have alcohol at home and 92% of respondents agreed that both mother and father opposed adolescent drinking.

These attitudes to adolescent drinking are consistent with earlier research conducted by Hoque and Ghuman (2012) in South Africa and Mares et al. (2011) in the Netherlands. Hoque and Ghuman (2012) indicated that a large number of mothers and fathers do not allow their adolescents to drink alcohol at home. Mares et al. (2011) discussed parents' strict attitudes about their children's drinking and noted that parents do not allow their children to use alcohol at home. In both these cases, the research findings are consistent with this current study. More broadly, Kabir and Goh (2014), in discussing female tobacco use in Sri Lanka indicated that globalisation, urbanisation and marketing strategies by the tobacco industry may result in increasing female tobacco use in Sri Lanka. These findings are for tobacco use, but it can be noted that female alcohol consumption may be similarly affected by globalisation, urbanisation and industry marketing.

6.3.3 Parental engagement with adolescents in relation to alcohol use

One key objective of this thesis was to research Sri Lankan parental engagement with their adolescents in relation to alcohol. According to the literature review there is ample research conducted in western countries on parental engagement and adolescents' alcohol use. There is, however, limited scientific knowledge or social research in relation to parental engagement in South Asian countries and especially in Sri Lanka. The findings of this research, therefore, are

new but can be discussed within a wider international context. The findings from the focus groups in this research provide particularly illuminating detail on the nature of parental engagement.

Parental monitoring

Both parents are well engaged in monitoring their adolescent children. Participants agreed that their mothers, compared with their fathers, were more likely to know who their friends are (92% and 82% respectively) and how they spend their pocket money (83% and 77% respectively). Mothers' monitoring was associated with the gender of respondents, with girls agreeing more that their mothers monitored both their friends (98.4%; $p = 0.01$) and spending (88.6%; $p = .03$).

International research on parental monitoring and adolescents' alcohol use indicated that strong parental monitoring can deter adolescents' alcohol use. Research also indicated that parents are effective monitors (Arria et al., 2008; Dishion & McMahon, 1998; Stattin & Kerr, 2000). Although the current research was not able to establish causality, certainly higher levels of parental monitoring were associated with lower levels of adolescent alcohol use as measured by 'I have drunk alcohol myself'. When adolescents report that their mother knows their friends, 5.2% also report drinking alcohol; when their mother does not know their friends, 12.3% report alcohol consumption ($p=<0.01$). There are similar results when mothers know how their pocket money is spent, and when fathers know who their friends are and how pocket money is spent.

According to Gilligan and Kypri (2012), parents engage using different parental strategies to support the development and health of their adolescents such as parental rules, communication, and monitoring. The reports from the focus group interviews indicated that Sri Lankan parents also use different mechanisms to monitor their adolescents. Parents who monitor tend to be highly aware of their adolescents' school grades and also get information from their children's friends. Parents themselves are able to recognise any unusual behaviour in their children. Participants reported specifically that when parents heard about a friend's drinking, parents increased their own monitoring to try to be aware of their own child's behaviour, seeing the friend's drinking as a possible indicator of their own child's behaviour.

Participants also reported that physical, as well as behavioural changes, were used by parents to recognise adolescent drinking. They realised that parents could see physical changes such as red faces and eyes, untidy hair, bad breath, walking unsteadily and talking without thinking.

Participants in the focus groups acknowledged their parents to be resourceful and have good sources of information, but also reported circumstances when parental monitoring was not effective. In Sri Lanka, many children participate in extra tuition classes, mostly after school hours. Focus group participants reported on how their fellow adolescents used this tuition time to misbehave, including using alcohol. If, as Stattin and Kerr (2000) suggest, good parental knowledge is required for effective monitoring, then parents may require new skills and information to monitor their adolescents. Similarly, as Dishion and McMahon (1998) indicated, parental monitoring may not be effective enough to recognise adolescents' alcohol use in new settings. As adolescents get older they spend more time away from their parents, suggesting that parents may continually need new monitoring skills to recognise adolescents' behaviour.

Parental controlling

According to both focus groups and the cross-sectional survey, parental control appears much less prominent or efficiently performed than parental monitoring. This is contrary to the expectations of the international literature that indicates that consistent control is related to lower participation in drinking among adolescents (Koning et al., 2012).

With respect to mothers and fathers deciding on their friends and how their pocket money is spent, participants agreed that their parents demonstrated these controlling behaviours at less than 50% on all four variables. Control on spending pocket money was statistically significantly associated with age, with younger respondents experiencing more control. Only one variable, 'my mother decides how I spend my money' was significantly associated with adolescents responding that they had 'drunk alcohol myself' with lower levels of alcohol consumption associated with higher levels of maternal control.

Van der Vorst et al., (2007) found that clear, alcohol-specific rules could be particularly effective in controlling adolescent consumption. According to focus group participants, however, parental rules were rarely planned or established, with parents reacting to the particular situation. Mostly, mothers stated the family rules regarding alcohol and findings showing that mothers exert the

most control over alcohol use. It was clear that some families have different rules for different members of the family. As some male participants' explained, boys will not go home if it is apparent that they have been using alcohol, and if the father drinks alcohol, then family rules are really strict for boys. Female participants who expressed ideas about family rules believe that it is mothers' responsibility to create a safe environment for their children. As discussed above, survey respondents expressed the view that Sri Lankan adults' alcohol behaviour can create problems in the family. In the focus groups, it was clear that if the husband drinks alcohol the mother will not try to influence her husband's drinking but will try to ensure that the father does not create problems at home.

The focus groups also revealed that 'parental' control is a limited concept in Sri Lankan families where the extended family, particular, grandparents in the same household, exerted considerable control. Participants agreed that close parental control could reduce alcohol use, especially because most of the occasions when adolescents attend social events, such as parties or weddings, their parents are also there and there is no chance to drink alcohol. They also explained that drinking 'close to home', in their village or around their house, was risky since their parents would soon find out their alcohol use.

Harris-McKoy and Cui (2012) suggested that parental behavioural control is essential for positive outcomes in adolescent life and that a certain level of control is important to reduce adolescents' delinquent behaviour. Although survey findings did not show any statistically significant association between parental control and adolescents behaviour, the focus group findings are consistent with Harris-McKoy and Cui (2012), showing that participants' parents were aware of who they associate with and that they wished to control the selection of friends. Despite this, there are clearly local and cultural factors that will influence the effectiveness of direct control in Sri Lanka. There are indications that the rules in Sri Lankan families may not always be clear or consistent.

Parental Communication

International research reported that good family communication is associated with lower levels of adolescent alcohol consumption (Mares et al., 2011; Martyn et al., 2009).The cross-sectional survey, however, indicated that adolescents do not perceive their parents as strong communicators on alcohol related matters. Fewer than 50% of respondents reported agreement that their mothers' and fathers' communicated on both variables ('Mother/father and I discuss the media portrayal of alcohol'; 'Mother/father and I are interested in each other's opinions regarding alcohol use'). Survey findings showed that the mothers' communication was slightly higher than the fathers' on all four variables, possibly a helpful tendency as Mares et al. (2011) in a Dutch study found that maternal communication was particularly effective in reducing adolescent alcohol consumption. There was no association of any of the communication variables with age, and only one with gender; female respondents reporting significantly more agreement than males that they discuss with their mothers the media portrayal of alcohol. Only one parental communication variable 'my father and I have discussed the media portrayal of alcohol' had a statistically significant association (p=.014) with the outcome variable 'I have drunk alcohol', but with no clear relationship between increased discussion and lower levels of drinking.

The four focus groups reported additional detail in relation to parental communication. They reported that most parents communicate with their adolescents when there is an issue raised as a consequence of alcohol use. Some participants reported that their parents talked about drinking when parents hear about friends or other adolescents drinking. Otherwise, parents do not discuss alcohol and alcohol is not a topic that is common in family conversations. Some adolescents reported that they did not remember when they had discussion alcohol with their parents. When parents did discuss alcohol it was to point out the negative consequences of drinking, such as kidney problems, problems in education, how alcohol cause diseases, and how alcohol can generally create problems in their lives. Parents advise their adolescents not to start drinking alcohol as it is difficult to stop. They also indicate that habitual drinking may cause them to become isolated from society and lose the respect of the community. Adolescents also reported that their parents have told them about the economic consequences of excessive consumption.

As with parental monitoring, parents are reactive and communicate with their children when there is an issue in the community that brings alcohol to their attention. There is no apparent consistency or strategy in parental communication about alcohol.

van der Vorst et al. (2010) suggested that verbal communication as the most direct way for parents to express their thoughts, rules, and concerns about alcohol to their children. They also reported that communication on the negative consequences alcohol is linked to lower levels of adolescent alcohol use. Researchers noted that high quality communication on topics such as negative consequences of alcohol is linked to lower level of adolescents' alcohol use.

Most research on parent-child communication focuses on problematic adolescent alcohol use. Mares et al. (2011) indicated that when mothers communicate with their children about alcohol, it lowers the level of adolescent alcohol related problems. Those reports are similar to the conversations in the focus groups that reported that parents communicate with them to express their views about alcohol, friend and rules. In this study maternal communication was more prominent in the survey, although not particularly significantly so, but did not particularly emerge in the focus group discussions.

6.3.4 Unexpected findings

One of the surprising findings was the participants' knowledge of the political influence in the country in relation to alcohol issues. From the perspective of adolescents, it is an unexpected finding as participants provided important information on how sellers escape from the law enforcement agencies by using political influence and 'insider' knowledge. This had long been suspected but scholarly research was limited (Hettige & Paranagama, 2005; Perera & Torabi, 2009). This was confirmed in detail by both focus groups and the cross-sectional survey. Focus group participants reported that most sellers escape fines and legal action through corrupt law enforcement agencies and the influence of politicians. The survey findings showed also that a considerable proportion (72%) of adolescents reported they agreed that corrupt law enforcement agencies were responsible for illegal alcohol use among young people.

Another unexpected finding is adolescents' apparent lack of knowledge of the Sri Lankan regulation regarding alcohol production, sale and distribution and strong views on the need for more and stronger legislation. Although Sri Lanka already has strong laws in relation to alcohol industry under the NATA legislation, a large majority of participants reported the need for more to be done to reduce young people's alcohol use. A majority of participants (76%) reported that weak government legislation was responsible for underage drinking.

According to previous research, the prevalence of Sri Lankan female drinking is usually reported as under 5% (Katulanda et al., 2014; Perera & Torabi, 2009). The two questions in the survey on female drinking reveal interesting findings. Only 1% of participants reported that their mother drinks alcohol, but 55% of respondents had seen females drinking which seems a high level of reporting. Although some research has reported increased female drinking in Sri Lanka this high level of observed female drinking is nevertheless (Hettige & Paranagama, 2005; Somatunga et al., 2014) unexpected even if it related to adolescents observing young women drinking.

The role of peers did not show up in the survey as important or as strong an influence as might be expected given the literature on adolescents. Previous research recognised that early adolescence is a time when peers play a particularly important role in shaping behaviours and the peer group is the major training ground for alcohol use (Bray et al., 2003; Nash et al., 2005).

Focus group findings explained clearly how friends introduce alcohol to others and refusing alcohol creates isolation within the group. The focus groups also reported that the peer group is seen as a major training ground for alcohol use and peers are thought to supply the adolescents with the attitudes, motivations, and rationalisation to support drinking behaviour. Although focus group findings indicated peers were important, survey findings did not provide particularly strong support for the focus group reports or the international literature. There were inconsistent results regarding friends' influence on adolescent drinking. While 45% agreed that they can obtain alcohol from friends only 9% agreed that their friends invited them to drink alcohol.

6.4 Study limitations

Limitations of the study include aspects of design and methods that may influence the value of results or their subsequent application. First, there were limitations with the samples chosen for both parts of the study. These include being drawn only from urban areas, age range and excluding information on ethnic or religious identity.

The research obtained data only from urban areas in four districts. Students in public schools are usually drawn from families and communities with similar life styles so findings are indicative of urban adolescents' attitudes towards alcohol. Including rural areas was beyond the capability of the PhD thesis, but this meant that results could not be generalised to the whole population and specific issues for rural areas, for example, the greater access to illegal liquor, could not be considered.

Another limitation of the sample was that it included adolescents only 15-18 years in the survey sample. This was done because there are additional ethical barriers to involving children under 15 years of age, therefore younger adolescents' views are not represented in the findings. While this may seem reasonable because younger adolescents may have less direct exposure to alcohol, it could be problematic because much of the research evidence suggests that the earlier the exposure to alcohol the more significant the later consequences (Getz and Bray, 2005; De Witt et al., 2000).

The cross sectional survey sample also excluded questions on ethnicity and religion despite the evidence (Hettige & Paranagama, 2005) that there are important religious and ethnic differences in relation to alcohol use. The decision to exclude questions on ethnicity and religion were taken because of the sensitivity of such questions, particularly following the civil war in Sri Lanka, and the need to avoid questions that might lead to fewer responses. As the civil war affected all ethnic groups in some way, future research should consider including ethnicity in surveys so that findings can be useful for developing public health systems to meet the needs of all groups in the community. A number of international studies have also reported the lack of diversity as limitations in similar research (Tomczyk et al., 2015; Trucco et al., 2014).

A second limitation of the survey was that that information on respondents' own behaviour is self-reported, a concern expressed by other researchers (Koning et al., 2012). Therefore, there is

some doubt about whether adolescents expressed the truth regarding their actual alcohol behaviour. For example, in terms of adolescents' experience of alcohol, only 5% of participants reported that they have drunk alcohol and 4% reported that it was 'OK to drink alcohol under 21 years of age'. However, a considerable proportion 71% reported seeing others under 21 drinking. There are some inconsistencies in these results that suggest that the participants may not always answer honestly.

A third limitation of the survey is that some variables invited opinions expressed by respondents about the behaviour of others that are likely to be both subjective (as expected) but also based on incomplete knowledge. The research reported adolescents' views on their parents' behaviour regarding the parental engagement that may not have reflected parents' actual behaviour. For example, less than 1% agreed with the statement 'my mother drinks alcohol', but 12% responded as neutral indicating that maybe they did not know. Also, 22% agreed 'my father's drinks alcohol' but 17 % reported neutral views maybe indicating that they did not know. This limitation has also been noted by other researchers (Arria et al., 2008). As Pasch et al. (2010) reported, it is important to use both parents' and students' views to increase the strength of the research.

A fourth limitation of the survey is that some of the measures used in the survey may lead to unclear findings. For example, the measure 'I have drunk alcohol myself' could mean anything from a single experimental drink to regular drinking. It is possible that a more complex question or series of questions may be more useful, or that responses based on the Likert scale may not always be appropriate. In addition, because of the broad scope of the survey, there were only a few parental engagement items used, selected from other surveys. A more detailed investigation into parental engagement would allow a more comprehensive set of items to be used.

Another limitation of the survey is that because of the term tests, schools with a large number of eligible students showed a low participation rate and schools with a small number of eligible students showed a higher participation rate. Therefore, this bias might be affecting the final results of the study.

Finally, as a cross-sectional survey, it was not possible to test for reverse causation.

6.5 Contributions of this research

This research makes contributions in the following areas: research, knowledge, policy, and practice.

Research methodology

This research addressed a new and difficult area of investigation for Sri Lanka that involved a sensitive topic and methodological challenges. The project has shown that it is possible to complete research on this topic with subjects willing to participate and institutions ready to provide support. Support for this work was received from the Ministry of Education, individual schools and the Healthy Lanka NGO, as well as families and students. This suggests that undertaking this type of research in the future is realistic.

The thesis demonstrated how a well-integrated mixed-methods approach combines rich qualitative text and the precision of survey methodology to provide complementary insights that help expand knowledge in the area of adolescents and alcohol.

Contribution to knowledge

There has been a major gap in knowledge in Sri Lanka regarding adolescent attitudes to and behaviour regarding alcohol within the wider environmental context. Also, although there has been some research on adolescent-parent relationships in Sri Lanka, this has not been in relation to alcohol, so this aspect of the thesis also fills an important specific knowledge gap regarding parental engagement and alcohol use. This research provided a strong focus on gender, ensuring data on males and females and mothers and fathers separately.

In terms of the contribution of the research findings, a large proportion of adolescents reported that young people drink alcohol for negative reasons such a depression, finding solutions to their problems and because they want to feel good about themselves. This suggests that alcohol research should not be seen in isolation but in terms of wider society, with the public health model outlined in Chapter 1 and the different levels of the ecological circle (Bronfenbrenner, 1994) providing a framework for researching adolescent health.

Policy Debates

This thesis allows a more informed debate on public policy in relation to alcohol and adolescents, in two main ways.

First, this research has demonstrated that despite strong laws regarding alcohol production, sale and consumption, young people understand this so clearly this sends signals that the time is right for open debate about this and action taken to strengthen enforcement. Alcohol enforcement is exceptionally difficult, with the law flouted by consumers, suppliers and officials. This leads to an undermining of the macro- aspects of both the public health framework.

Second, this research considered adolescents and alcohol issues within the wider context of mental health in Sri Lanka and its important links with mental health. This is consistent with and reinforces the Sri Lankan government's approach to service and policy development, particularly its National Strategic Plan: Adolescent Health 2013-2017.

Practice

The thesis contributes specific knowledge relevant to practitioners working in the field of alcohol and adolescence. The process of undertaking this research has highlighted that despite the need for further research and policy debate, there already government and non-government agencies involved with and concerned about adolescent alcohol consumption.

The range of negative reasons young people gave for drinking suggests that the typical 'it's no fun' message regarding alcohol is likely to be inadequate and more constructive approaches (for example, life-skills, self-esteem training and organised counselling) might be more productive. This research has highlighted target areas for intervention and some of the parental tools that could be used. Similarly, parents and organised approaches could provide opportunities for skill development in parental engagement.

6.6 Implications, recommendations and conclusions

In order to provide a rational approach to managing a wealth of literature and research data, this thesis used models from both public health and the social sciences to show how the issue of adolescents and alcohol can be considered on a number of levels within a single project. The use of the public health model based on Whitehead et al. (2001) and aspects of the Bronfenbrenner (1994) 'Ecological Circle' enabled the integration of literature from various paradigms and both qualitative and quantitative data to present a coherent discussion.

Both the public health and ecological circle frameworks suggest that alcohol research should not be seen in isolation but in terms of wider society, a direction consistent with the Ministry of Health's National Strategic Plan: Adolescent Health 2013-2017. This emphasised the importance of restructuring the health care system to develop well-being in adolescents. Further, this report included reference to positive initiatives to improve the competencies and capabilities of adolescents. The report also set out the responsibilities of parents, families, policy makers, professional and communities to fulfil this purpose (Sri Lanka, 2013).

There are a number of research recommendations that arise from this thesis, but a particular focus can be placed on key areas such as:

- Research into different parental styles, adolescent behaviour and the social and national factors affecting adolescent health. As there are limited research instruments based on Sri Lanka or South Asian countries, researchers should work either to adapt research questionnaires from other places or develop and validate new ones to use Sri Lanka.
- Researchers consider the Strategic Plan: Adolescent Health 2013-2017 to ensure that alcohol research is not seen in isolation but in terms of wider society, within frameworks such as the public health model and the ecological circle (Bronfenbrenner, 1994).
- Given the wide range of potential research topics, it is recommended that a systematic approach to determining priorities be developed to guide the research community.

There are recommendations for policy. As noted earlier, the areas of alcohol control policy and enforcement are exceptionally difficult, with the law flouted by suppliers, consumers and

officials. Strong laws have so far been of little assistance in preventing adolescent alcohol use, undermining the macro-level aspects of both the public health framework and ecological circle. Despite this, it is important not to dismiss the need to pursue policy options and therefore, policy makers should prioritise finding alternative policies.

Priorities for policy development include:

- Considering ways of monitoring the effectiveness of enforcement through an independent assessor with powers to remove licences and raise issues for public debate.
- Policy makers, NGOs and other stakeholders invest in a strategic plan for adolescent alcohol intervention, including research.
- Continue the approach of seeing adolescent alcohol policy, not in isolation but integrated into planning for adolescent health more widely, as in the National Strategic Plan: Adolescent Health, 2013-2017.

Lastly, with respect to practice, it is important to acknowledge that, despite the need for high level policy action and further research, there are government and non-government agencies already involved in programmes to address adolescents' alcohol use problems. Understanding the problem is important for practising effectively and research results need to be communicated to this audience. It is recommended, therefore, that:

- Research findings be disseminated to community practitioners working in the field of alcohol and adolescence
- Parents be equipped with new knowledge about adolescent behaviour, including the differences between early and later adolescence and male/female behaviour, and approaches to new parental styles
- School-based counselling services and community and school-based parent programmes are strengthened.

Although various strategies have been used in different ways in an attempt to reduce adolescent alcohol use, the problem has not been fully addressed. The reasons for this include the relative ineffectiveness of these strategies, the impact of social forces or the lack of resources. Therefore it was important to seek new approaches focusing on adolescents and alcohol within the family

context while maintaining the broad public health approach. Although research into parental engagement in adolescent alcohol use has been undertaken in western countries, studies focused on adolescent alcohol use and parental engagement in Asian countries have been limited. As the problem was under-researched, this project sought both new insights and generalisable findings. Adopting mixed methods research, this thesis has achieved both of these purposes; it has filled some knowledge gaps related to patterns of and attitudes to alcohol consumption among adolescents, determined how selected national and local environmental factors are related to adolescent alcohol consumption and established some relationships between parental engagement and adolescent alcohol behaviour in Sri Lanka.

Adolescents are the future of society and adolescence is a unique and complex time of life. Therefore, examining the needs and risks of this group is crucial for helping them develop healthy lives. The Ministry of Health Sri Lanka, in its National Strategic Plan: Adolescent Health 2013-2017 reported on the importance of restructuring the health care system to develop well-being in adolescents. The report further indicated the need for positive adolescent development to improve their competencies and capabilities and explained the responsibilities of parents, families, policy makers, professionals and communities to achieve these goals. This research has provided substantial new information on parental engagement, adolescent behaviour, adolescent behaviour in relation to alcohol and other factors associated with adolescent health. The information arising from this research, and the public health and ecological frameworks in which it has been set and policy guidance from the Ministry of Health, will be particularly useful for those interested in improving the lives and health of adolescents.

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Appendices

Appendix A Focus Group Interview - Information Sheet for Adolescents

School of Health Sciences
University of Canterbury
PB 4800
CHRISTCHURCH 8020

School of Health Sciences
Telephone: 02108374180

Email: tdk20@uclive.ac.nz

Young people's decision whether or not to take up alcohol: views of adolescents' in Sri Lanka

Information Sheet for Adolescents

I am a PhD student at the School of Health Sciences, University of Canterbury. I am currently conducting a research on the young people's decision whether or not to take up alcohol. My purpose in the research is to examine the ways that parents engage with adolescents and adolescents' intentions to initiate alcohol consumption.

I would like to invite you to participate in my present study. First you will need to obtain permission from your parents to participate in this study. If your parents agree for you to take part, your involvement in this study will be to be part of a discussion group with an interviewer on your views about adolescent alcohol use and how this can be managed by parents. This discussion will take approximately one hour and take place at the Healthy Lanka offices. During the discussion if you face any emotional distress, the experienced Healthy Lanka staff will be available to assist you.

Please note that participation is voluntary and if you participate, you have right to withdraw from the study at any time without penalty. If you withdraw, I will do my best to remove any

information relating to you, and this is practically achievable. The results of the project may be published, but you may be assured of the complete confidentiality of data gathered in this study. Your identity will not be made available in any report. To ensure anonymity and confidentiality the data will be securely stored in password protected facilities and locked storage at the University of Canterbury for ten years following the study. It will then be destroyed. A thesis is a public document and will be available through the UC library.

This project is being carried out as a requirement for the PhD by Kaluliyanage Thanuja under the supervision of Associate Professor Pauline Barnett and Dr. Arindam Basu who can be contacted at (pauline.barnett@cantebrury.ca.nz , arindam.basu@canterbury.ca.nz). They will be pleased to discuss any concerns you may have about participation in the project.

This project has been reviewed and approved by the University of Canterbury Human Ethics Committee, and participants should address any complaints to The Chair, Human Ethics Committee, University of Canterbury, Private Bag 4800, Christchurch (human-ethics@canterbuty.ac.nz).

If your parents agree your participation in this study please complete attached consent form and return it to the designated staff member of Healthy Lanka Organization in the envelope provided.
I am looking forward you to working with you and thank you in advance for your contribution.

Thanuja Kaluliyanage

Appendix B Focus Group Interview – Interview Guide for Adolescents

School of Health Sciences
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FOCUS GROUP FOR ADOLESCENTS - INTERVIEW GUIDE

Introduction

This focus group discussion is designed to assess your current thoughts and feeling about young people's decision about initiation of alcohol.

Guiding Questions

1. Do you feel it is acceptable for people in your age to use alcohol? At what age do you feel it is acceptable?
2. Why do young people of your age drink alcohol?
3. Where can people your age obtain alcohol(Retail access/Social access)
   (For example: liquor store, bar, a restaurant, friends, parents, other family member, home (without parents' knowledge)
4. How easy is it for people at your age to obtain alcohol from various sources?
5. How often do people your age have access to alcohol at social settings such as parties at a friend place or unsupervised location?
6. Do your parents have any say in how you select your friends?
7. What kinds of things do you think most parents in your community would say about people your age drinking?
8. How do parents (yours? Your friends'?) approach the idea of young people drinking?
9. What are your own family rules for drinking alcohol?
10. What is your relationship with your parents regarding alcohol?
11. (Follow up questions asking about specific parental approaches: e.g. what do your parents say? Do they check on whether you are drinking?)
12. What kinds of alcohol advertising have you noticed in your life?

Conclusion question

- Is there any other information you would like to share that we have not already discussed?

Appendix C Focus Group Interview - Consent Form for Adolescents

School of Health Sciences
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Health Science Department
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Young people's decision whether or not to take up alcohol: views of adolescents' in Sri Lanka

Consent Form for Adolescents

(Please tick each box)

- ☐ I have read the information sheet and understand what will be required of me if I participate in this project.
- ☐ I understand that the group discussion will be audio-taped.
- ☐ I have read the information letter and understand that all information collected will only be accessed by the researcher and that it will be kept confidential and secure.
- ☐ I will respect the privacy of my fellow participants and not repeat what is said in the focus group to others
- ☐ I understand that I will be not identified in any presentations or publications that draw on this research.

- ☐ I understand that my participation is voluntary and I may choose to withdraw at any time.

- ☐ I understand that I can receive a report on the finding of the study. I have given my details below for the report to be sent.

- ☐ I understand that I can get more information about this project from the researcher, and that I can contact the University of Canterbury Ethics Committee if I have any complaints about the research.

- ☐ I agree to participate in this research and my parents have also given consent on their consent form.

Name:

Signature:

Date:

Contact No:

Please return this consent form in the sealed envelope to the interviewer.

Kaluliyanage Thanuja

Appendix D Focus Group Interview - Permission letter from Healthy Lanka

Healthy Lanka
ALLIANCE FOR DEVELOPMENT

Head Office
Healthy Lanka Alliance for Development
58/15 B, School Lane, Nawala, Rajagiriya, Sri Lanka.
Tele / Fax: 011-2884002

To whom it may concern

Facility approval letter

We are pleased to notify you that PhD researcher, Kaluliyanage Thanuja Dilrukshi can use our resources to conduct her PhD research. We are able to facilitate the following resources for her future research work.

1. Trained staff
2. Building facilities
3. Training equipment
4. Educational materials
5. Other available resources

If you have any further concern regarding this matter please contact me.

Yours sincerely

Mahendra Jayasinghe
Chairman

Mahendra Jayasinghe
Director/Programme Manager
Healthy Lanka Alliance for Development
58/19/1/1, School Lane
Nawala, Rajagiriya.

Appendix E Focus Group Interview – Recruitment Poster

Recruitment Poster

PARTICIPANTS NEEDED FOR

RESEARCH INTO HOW ADOLESCENTS MAKE DECISIONS ABOUT STARTING TO USE ALCOHOL

We are looking for volunteers aged 13-18 to take part in a study of how young people make decisions about starting to use alcohol

You would be asked to participate in a focus group interview with several other young people

Your participation would involve one session,
and the session will be about one hour long. You will be asked to come to Healthy Lanka main office in Colombo for the session.

In appreciation for your time, you will receive the traveling cost and the meal for the day.
For more information about this study, or to volunteer for this study,
please contact:

Research Department-Healthy Lanka

Colombo

This study has been reviewed by, and received ethics clearance by Human Ethic Committee at University of Canterbury. New Zealand

Appendix F Focus Group Interview – Confidentiality Agreement

School of Health Sciences

University of Canterbury

PB 4800

CHRISTCHURCH 8020

CONFIDENTIALITY AGREEMENT

I _____ understand that as an interviewer I will have access to confidential information on the discussion. As an interviewer, I undertake

a) to take all possible steps to preserve strict confidentiality regarding any information to which I have access through my work.

b) never to pass any information obtained as part of the discussion to anyone outside the discussion,

c) to keep all names, contact details and personal information secure.

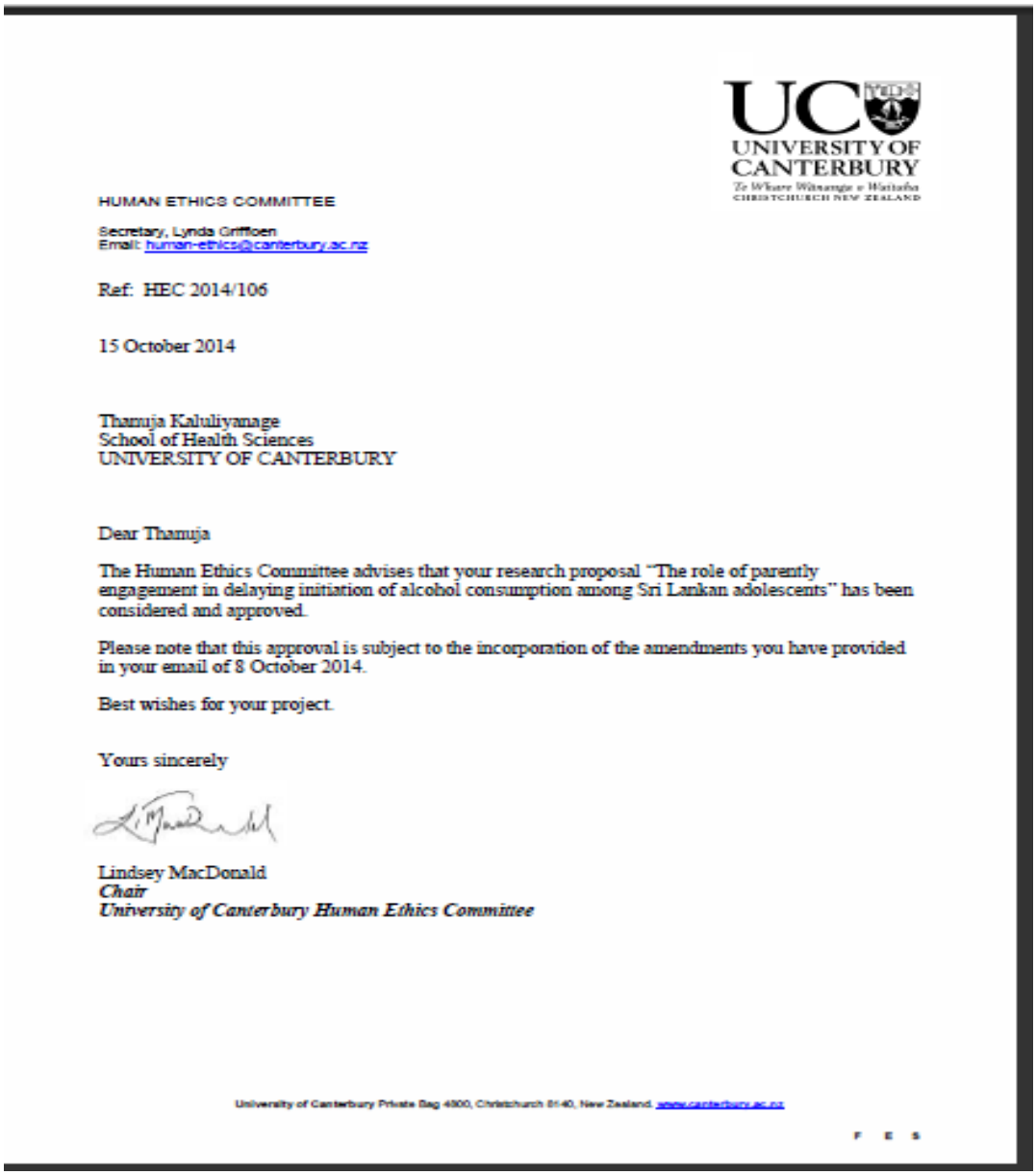
I understand that any breach of the above will result in disciplinary action and/or may expose me to a suit for damages in a court of law.

Signed_____ Date_____

Appendix G Approval Letter -Human Ethics Committee

School of Health Sciences
University of Canterbury
PB 4800
CHRISTCHURCH 8020

UNIVERSITY OF CANTERBURY
Te Whare Wānanga o Waitaha
CHRISTCHURCH NEW ZEALAND



UNIVERSITY OF CANTERBURY
Te Whare Wānanga o Waitaha
CHRISTCHURCH NEW ZEALAND

HUMAN ETHICS COMMITTEE

Secretary, Lynda Griffioen
Email: human-ethics@canterbury.ac.nz

Ref: HEC 2014/106

15 October 2014

Thanuja Kaluliyanage
School of Health Sciences
UNIVERSITY OF CANTERBURY

Dear Thanuja

The Human Ethics Committee advises that your research proposal "The role of parently engagement in delaying initiation of alcohol consumption among Sri Lankan adolescents" has been considered and approved.

Please note that this approval is subject to the incorporation of the amendments you have provided in your email of 8 October 2014.

Best wishes for your project.

Yours sincerely

Lindsey MacDonald
Chair
University of Canterbury Human Ethics Committee

University of Canterbury Private Bag 4800, Christchurch 8140, New Zealand. www.canterbury.ac.nz

F E S

Appendix H Survey of Adolescent – Human Ethics Committee Approval

School of Health Sciences
University of Canterbury
PB 4800
CHRISTCHURCH 8020

School of Health Sciences
Telephone: 02108374180

Email: tdk20@uclive.ac.nz

From: Human Ethics
Sent: Monday, 14 December 2015 12:10 p.m.
To: tdk20@uclive.ac.nz
Cc: Arindam Basu; Pauline Barnett
Subject: HEC APPLICATION 2015/138 - APPROVAL

Dear Thanuja

Thank you for your response to the Human Ethics Committee's comments on your recent application.

I am very pleased to advise that the Committee has reviewed your feedback and approved the application; please see the letter attached.

Kind regards

Lynda

Lynda Griffioen
Secretary
Ethics Committees
Hours: Monday, Wednesday & Thursday 8.30am-4.30pm
University of Canterbury
Te Whare Wānanga o Waitaha
Private Bag 4800
Christchurch 8140, New Zealand
Telephone +64 3 364 2987 Extn 45588

Appendix I Survey of Adolescent - Information Sheet for Parents

School of Health Sciences
University of Canterbury
PB 4800
CHRISTCHURCH 8020

School of Health Sciences

Telephone: 0224073995

Email: tdk20@uclive.ac.nz

Young people, families and alcohol in Sri Lankan Society

Information Sheet for Parents

I am a PhD student at the School of Health Sciences, University of Canterbury. I am currently conducting a research on young people, families and alcohol in Sri Lankan Society .

I would like to invite your child to participate in my study. If you agree that your child can take part, his/her involvement in this study will be filling a questionnaire about young people, families and alcohol in Sri Lankan the society. Answer to this questionnaire will take approximately twenty minutes and take place at school. During answering your child face any emotional distress, experienced people will be available to assist.

Please note that participation is voluntary and if your child participates, he/she has right to withdraw from the study at any time without penalty. If he/she withdraws, I will do my best to remove any information relating to your child where this is practically achievable.

The results of the project may be published, but your child can be assured of the complete confidentiality of data gathered in this study. Your child's identity will not be made available in

any report. To ensure anonymity and confidentiality no names will be on the questionnaire and the data will be securely stored in password protected facilities and locked storage at the University of Canterbury for ten years following the study. It will then be destroyed. A thesis is a public document and will be available through the University of Canterbury library.

This project is being carried out as a requirement for the PhD by Kaluliyanage Thanuja under the supervision of Associate Professor Pauline Barnett and Dr. Arindam Basu who can be contacted at pauline.barnett@canterbury.ca.nz , arindam.basu@canterbury.ca.nz. They will be pleased to discuss any concerns you may have about your child's participation in the project.

This project has been reviewed and approved by the University of Canterbury Human Ethics Committee, and participants should address any complaints to The Chair, Human Ethics Committee, University of Canterbury, Private Bag 4800, Christchurch (human-ethics@canterbuty.ac.nz).

If you agree to your child's participation in this study please complete attached parents' consent form and return it to the school in the envelope provided.

I am looking forward to working with your child and thank you in advance for your consideration.

Thanuja Kaluliyanage
PhD student
077-9225053

Appendix J Survey of Adolescents - Consent form for parents

School of Health Sciences
University of Canterbury
PB 4800
CHRISTCHURCH 8020

School of Health Sciences

Telephone: 0224073995

Email: tdk20@uclive.ac.nz

Young people, families and alcohol in Sri Lankan Society

Consent form for parents

I have read and understood the description of the project, young people, families and alcohol in Sri Lankan society. On this basis, I agree that my child may participate in this project and I consent to publication of the results of the understanding that anonymity will be preserved.
I understand also that my child may at any time withdraw from the project, including withdrawal of any information my child has provided.
I note that the project has been reviewed **and approved** by the University of Canterbury Human Ethics Committee.

Child's Name.....

Name (Please print).....

Signature.....

Appendix K Survey of Adolescents - Information Sheet for Adolescents

School of Health Sciences
University of Canterbury
PB 4800
CHRISTCHURCH 8020

School of Health Sciences

Telephone: 0224073995

Email: tdk20@uclive.ac.nz

Young people, families and alcohol in Sri Lankan Society

Information Sheet for Adolescents

I am a PhD student at the School of Health Sciences, University of Canterbury. I am currently conducting a research on young people, families and alcohol in Sri Lankan Society.

I would like to invite you to participate in my present study. Your parent/guardian has already given permission for you to participate in this study. Your involvement in this study will be filling a questionnaire about young people, families and alcohol in Sri Lankan the society. Answering this questionnaire will take approximately twenty minutes and take place at school. During answering if you face any emotional distress, experienced people will be available to assist, and you can contact the independent Healthy Lanka organisation (Telephone-0112884002).

Please note that participation is voluntary and if you participate, you have right to withdraw from the study at any time without penalty. If you withdraw, I will do my best to remove any information relating to you where this is practically achievable.

The results of the project may be published, but you can be assured of the **complete confidentiality** of data gathered in this study. Your identity will not be made available in any report. To ensure anonymity and confidentiality no name will be on the questionnaire and the data will be securely stored in password protected facilities and locked storage at the University of Canterbury for ten years following the study. It will then be destroyed. A thesis is a public document and will be available through the UC library.

This project is being carried out as a requirement for the PhD by Kaluliyanage Thanuja under the supervision of Associate Professor Pauline Barnett and Dr. Arindam Basu who can be contacted at
(pauline.barnett@canterbury.ca.nz , arindam.basu@canterbury.ca.nz).
They will be pleased to discuss any concerns you may have about participation in the project.

This project has been reviewed and approved by the University of Canterbury Human Ethics Committee, and participants should address any complaints to The Chair, Human Ethics Committee, University of Canterbury, Private Bag 4800, Christchurch (human-ethics@canterbuty.ac.nz).

Thank you in advance for your contribution to our project.

Thanuja Kaluliyanage
PhD student
Phone No- 0779225053

Appendix L Permission Letter-Ministry of Education Sri Lanka

தொலைபேசி இல. Telephone No.

அமைச்சகம் / அமைச்சர் / Minister } 2784832 Fax: 2784825

செயலாளர் / Secretary } 2784812

அலுவலகம் / Office } 2785141-50 Fax: 2784846

மின்-மெயில் / E-mail : isurupaya@moe.gov.lk

உமது இல. / Your No. } .....

අධ්‍යාපන අමාත්‍යාංශය
கல்வி அமைச்சு
Ministry of Education

"ඉසුරුපාය"
பத்தரமுல்ல.
"Isurupaya"
Battaramulla.

எமது இல. / My No. } ED/01/21/ 07/03

திகதி / Date } 2016/03/22

.....

.....

.....

Dear Principal

Permission to conduct a research on young people, families and alcohol in Sri Lankan society

The purpose of this letter is to inform you that the Ministry of Education has given permission to conduct a research at Government National Schools on young people, families and alcohol in Sri Lankan society. This research is being carried out as a requirement for the PhD by Kaluliyanage Thanuja at University of Canterbury, Christchurch, New Zealand.

This approval is subject to compliance to the information sheet about the research provided by the research. For your further consideration I have attached a copy of information sheet with this letter. Please provide any assistance necessary to successful this research.

Please do not hesitate to contact Ministry of Education for any classification or query.

Yours faithful

Renuka Peiris
Director of Education
Ministry of Education
(for secretary)

Renuka Peiris
Director of Education
School Health & Nutrition Branch
Ministry of Education
"Isurupaya"
Battaramulla

Appendix M Survey of Adolescents - Information Sheet for principals

School of Health Sciences
University of Canterbury
PB 4800
CHRISTCHURCH 8020

School of Health Sciences

Telephone: 02108374180

Email: tdk20@uclive.ac.nz

Young people, families and alcohol in Sri Lankan Society

Invitation letter and Information Sheet for principals

Dear Principal

I am a PhD student at the School of Health Sciences, University of Canterbury. I am undertaking research on young people, families and alcohol in Sri Lankan society. I have permission from the Ministry of Education to conduct the research in Government National schools (copy of the permission letter attached) and your school has been randomly selected to take part. Further I will obtain parents' consent for their child to participate in this research.

I would like to invite students in year 9 to 12 to participate in my study. If you agree that students can take part, their involvement in this study will be completing a short questionnaire about young people, families and alcohol in Sri Lankan society. Answering this questionnaire will take approximately twenty minutes and take place at school outside class time. We will carry out the research for two days; first day will be the recruitment day and the second day will be the research conducting day. I will arrange appropriate dates for the recruitment day and the research conducting day in accordance with your advice concerning other school programmes.

If a student experiences any emotional distress while completing the questionnaire, experienced people will be available to assist both at the time and later. If you would like further information about this, please contact Healthy Lanka Alliance for Development, contact number 011-2884002.

Please note that participation is voluntary and if students participate, they have right to withdraw from the study at any time without penalty. If they withdraw, I will do my best to remove any information relating to those students where this is practically achievable, but this will not be possible after the questionnaire is completed and handed in.

The results of the project may be published, but students can be assured of the complete confidentiality of data gathered in this study. I will email you the results of the research which can then be made available to the school and all students and parents. I will indicate to students and parents that you will have this information available due course.

Although students cannot withdraw from the survey after they have filled out the questionnaire and handed it in, the identity of students will not be made available in any report. To ensure anonymity and confidentiality no names will be on the questionnaire and the data will be securely stored in password protected facilities and locked storage at the University of Canterbury for ten years following the study. It will then be destroyed. A thesis is a public document and will be available through the University of Canterbury library.

This project is being carried out as a requirement for the PhD by Kaluliyanage Thanuja under the supervision of Associate Professor Pauline Barnett and Dr. Arindam Basu who can be contacted at pauline.barnett@canterbury.ca.nz , arindam.basu@canterbury.ca.nz. They will be pleased to discuss any concerns you may have your school's participation in the project.

This project has been reviewed and approved by the University of Canterbury Human Ethics Committee, and participants should address any complaints to The Chair, Human Ethics Committee, University of Canterbury, Private Bag 4800, Christchurch (human-ethics@canterbury.ac.nz).

Thank you in advance for your consideration, and I look forward to discussing further details with you.

Thanuja Kaluliyanage
PhD student
077-9225053

Appendix N Survey of Adolescents – Questionnaire

School of Health Sciences
University of Canterbury
PB 4800
CHRISTCHURCH 8020

Young people, families and alcohol in Sri Lankan Society:
A questionnaire survey of 15-18 year olds

The following questionnaire will ask you about a number of issues important to the role that alcohol plays in the lives of young people in Sri Lanka. It will take about fifteen twenty minutes to complete and will be helpful for planning services for young people.

Your school and parent/guardian have consented to your participation and I now invite you to complete the questionnaire that follows. This is **totally confidential** and no-one will be able to identify you. The results will be reported in total and no individual responses will be made public.

Your participation is voluntary and you do not have to complete the questionnaire if you do not want to.

Please answer all the sections as honestly and accurately as you can, remember it is anonymous. There are no right or wrong answers and this is not a test!

When you have completed the questionnaire , or if you choose not to complete it, please place the questionnaire back in the envelope provided and seal it for collection.

If you would like further information or advice about alcohol, please contact Healthy Lanka Alliance for Development, contact number 011-2884002.

THANK YOU.

This project is being carried out as a requirement for the PhD by Kaluliyanage Thanuja, contact number is 0779225053. This project has been reviewed and approved by the University of Canterbury Human Ethics Committee, University of Canterbury, Private Bag 4800, Christchurch.

Background Information

Please tick one circle that apply to you

1. Gender ○ Male ○ Female
2. Your age - write in the box ____
3. How many brothers and sister do you have?

○ None ○ One ○ Two

○ Three ○ Four ○ More than four

4. Your birth position in the family

○ One ○ Two ○ More than four

○ Three ○ Four

5. Father's education level

○ Ordinary ○ Advanced Level ○ Degree ○ Don't know

○ Diploma or Certificate ○ Vocational & Training ○ Other ○ Did not complete school

6. Mother's education level

○ Ordinary ○ Advanced Level ○ Degree ○ Don't know

○ Diploma or Certificate ○ Vocational & Training ○ Other ○ Did not complete school

Part 1

You and your family

To what extent do you agree or disagree with the following statements. Please tick the one circle that applies to you.

If you do not have a mother/caregiver, or father, living with you then please tick: Not applicable

1. My mother knows who my friends are.

○ AgreeStrongly ○ Agree ○ nor Disagree ○ Disagree ○ Disagree Strongly ○ Not Applicable

2. My father knows my friends are.

○ Strongly Agree ○ Agree ○ Neither Agree nor Disagree ○ Disagree ○ Strongly Disagree ○ Not Applicable

3. My mother knows how I spend my pocket money.

○ Strongly Agree ○ Agree ○ Neither Agree nor Disagree ○ Disagree ○ Strongly Disagree ○ Not Applicable

4. My father knows how I spend my pocket money.

○ Strongly Agree ○ Agree ○ Neither Agree nor Disagree ○ Disagree ○ Strongly Disagree ○ Not Applicable

5. My mother decides which friends I spend time with.

○ Strongly Agree ○ Agree ○ Neither Agree nor Disagree ○ Disagree ○ Strongly Disagree ○ Not Applicable

6. My father decides which friends I spend time with.

○ Strongly Agree ○ Agree ○ Neither Agree nor Disagree ○ Disagree ○ Strongly Disagree ○ Not Applicable

7. My mother decides how I spend my pocket money.

○ Strongly Agree ○ Agree ○ Neither Agree nor Disagree ○ Disagree ○ Strongly Disagree ○ Not Applicable

8. My father decides how I spend my pocket money.

○ Strongly Agree ○ Agree ○ Neither Agree nor Disagree ○ Disagree ○ Strongly Disagree ○ Not Applicable

9. My mother and I discuss the media portrayal of alcohol freely.

○ Strongly Agree ○ Agree ○ Neither Agree nor Disagree ○ Disagree ○ Strongly Disagree ○ Not Applicable

10. My father and I discuss the media portrayal of alcohol freely

○ Strongly Agree ○ Agree ○ Neither Agree nor Disagree ○ Disagree ○ Strongly Disagree ○ Not Applicable

11. My mother and I are interested in each others' opinion regarding alcohol use.

○ Strongly Agree ○ Agree ○ Neither Agree nor Disagree ○ Disagree ○ Strongly Disagree ○ Not Applicable

12. My father and I are interested in each others' opinion regarding alcohol use.

○ Strongly Agree ○ Agree ○ Neither Agree nor Disagree ○ Disagree ○ Strongly Disagree ○ Not Applicable

13. My mother drinks alcohol.

○ Strongly Agree ○ Agree ○ Neither Agree nor Disagree ○ Disagree ○ Strongly Disagree ○ Not Applicable

14. My father drinks alcohol.

○ Strongly Agree ○ Agree ○ Neither Agree nor Disagree ○ Disagree ○ Strongly Disagree ○ Not Applicable

15. My mother is against adolescents' alcohol drinking.

○ Strongly Agree ○ Agree ○ Neither Agree nor Disagree ○ Disagree ○ Strongly Disagree ○ Not Applicable

16. My father is against adolescents' alcohol drinking.

○ Strongly ○ Agree ○ Neither Agree ○ Disagree ○ Strongly ○ Not Applicable

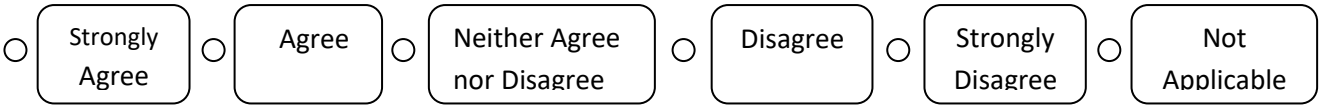
Part 2

Adolescents and alcohol in society

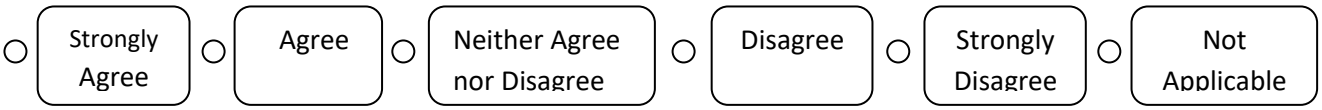
To what extent do you agree or disagree with the following statements.

Please tick the one circle that applies to you.

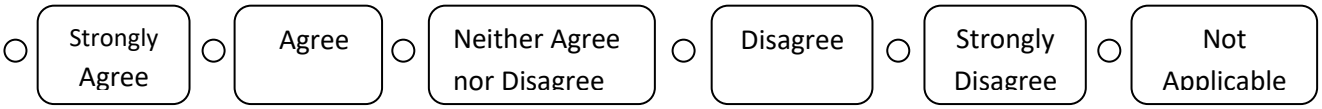
1. My friends invite me to drink.



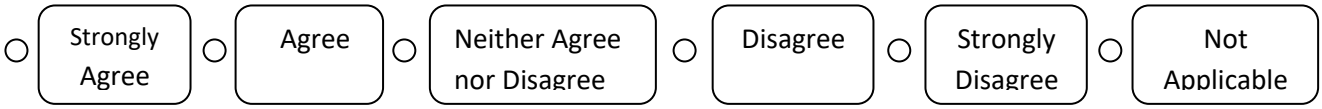
2. My friends object to me drinking



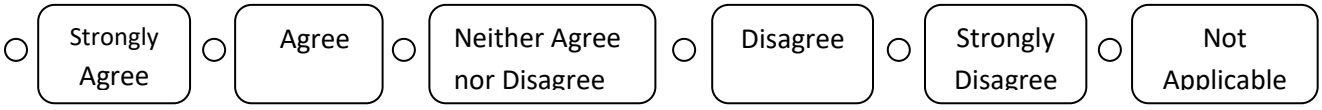
3. I think it is OK to drink when under 21 years of age



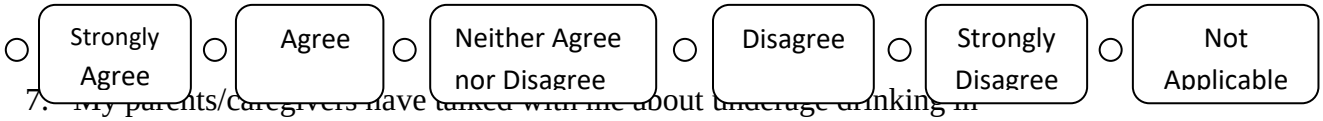
4. I have drunk alcohol myself



5. I have seen other people under 21 years of age drink alcohol



6. I have heard that people my age drink alcohol



7. My parents/caregivers have talked with me about underage drinking in society

○ Strongly Agree ○ Agree ○ Neither Agree nor Disagree ○ Disagree ○ Strongly Disagree ○ Not Applicable

8. My parents/caregivers permit me to drink alcohol at home

○ Strongly Agree ○ Agree ○ Neither Agree nor Disagree ○ Disagree ○ Strongly Disagree ○ Not Applicable

9. People my age can easily buy alcohol from legal sources

○ Strongly Agree ○ Agree ○ Neither Agree nor Disagree ○ Disagree ○ Strongly Disagree ○ Not Applicable

10. People my age can find illegal places to buy alcohol

○ Strongly Agree ○ Agree ○ Neither Agree nor Disagree ○ Disagree ○ Strongly Disagree ○ Not Applicable

11. There have been negative incidents from alcohol use among friends and neighbours

○ Strongly Agree ○ Agree ○ Neither Agree nor Disagree ○ Disagree ○ Strongly Disagree ○ Not Applicable

12. There have been negative incidents from alcohol use among family members

○ Strongly Agree ○ Agree ○ Neither Agree nor Disagree ○ Disagree ○ Strongly Disagree ○ Not Applicable

13. I have seen a female drinking alcohol

○ Strongly Agree ○ Agree ○ Neither Agree nor Disagree ○ Disagree ○ Strongly Disagree ○ Not Applicable

14. Where is the main place where people under the age of 21 obtain alcohol?

a. Parent's home

○ Strongly Agree ○ Agree ○ Neither Agree nor Disagree ○ Disagree ○ Strongly Disagree ○ Not Applicable

b. Legal Places

○ Strongly Agree ○ Agree ○ Neither Agree nor Disagree ○ Disagree ○ Strongly Disagree ○ Not Applicable

c. Friends

○ Strongly Agree ○ Agree ○ Neither Agree nor Disagree ○ Disagree ○ Strongly Disagree ○ Not Applicable

d. Neighbours

○ Strongly Agree ○ Agree ○ Neither Agree nor Disagree ○ Disagree ○ Strongly Disagree ○ Not Applicable

e. Illegal places

○ Strongly Agree ○ Agree ○ Neither Agree nor Disagree ○ Disagree ○ Strongly Disagree ○ Not Applicable

15. In my opinion following behaviours are often associated with alcohol consumption. To what extent do you agree or disagree with the following behaviours.

a. Fighting with others

○ Strongly Agree ○ Agree ○ Neither Agree nor Disagree ○ Disagree ○ Strongly Disagree ○ Not Applicable

b. Disturbing neighbours and making noise

○ Strongly Agree ○ Agree ○ Neither Agree nor Disagree ○ Disagree ○ Strongly Disagree ○ Not Applicable

c. Walking unsteadily on the roads

○ Strongly Agree ○ Agree ○ Neither Agree nor Disagree ○ Disagree ○ Strongly Disagree ○ Not Applicable

d. Ruining their family members' life

○ Strongly Agree ○ Agree ○ Neither Agree nor Disagree ○ Disagree ○ Strongly Disagree ○ Not Applicable

e. Living happily with the family and neighbours

○ Strongly Agree ○ Agree ○ Neither Agree nor Disagree ○ Disagree ○ Strongly Disagree ○ Not Applicable

16. The following circumstances are said to be important in contributing to the problem of young people drinking. To what extent do you agree that this is the case.

a. Weak government regulations

○ Strongly Agree ○ Agree ○ Neither Agree nor Disagree ○ Disagree ○ Strongly Disagree ○ Not Applicable

b. Advertising of alcohol

○ Strongly Agree ○ Agree ○ Neither Agree nor Disagree ○ Disagree ○ Strongly Disagree ○ Not Applicable

c. Permissive attitudes of society

○ Strongly Agree ○ Agree ○ Neither Agree nor Disagree ○ Disagree ○ Strongly Disagree ○ Not Applicable

d. Poor law enforcement agencies

○ Strongly Agree ○ Agree ○ Neither Agree nor Disagree ○ Disagree ○ Strongly Disagree ○ Not Applicable

17. To what extent do you agree that the following people are important influences on the decision of young people to drink or not?

a. Friends

○ Strongly Agree ○ Agree ○ Neither Agree nor Disagree ○ Disagree ○ Strongly Disagree ○ Not Applicable

b. Parents/guardian

○ Strongly Agree ○ Agree ○ Neither Agree nor Disagree ○ Disagree ○ Strongly Disagree ○ Not Applicable

c. Other family members

○ Strongly Agree ○ Agree ○ Neither Agree nor Disagree ○ Disagree ○ Strongly Disagree ○ Not Applicable

d. Neighbours

○ Strongly Agree ○ Agree ○ Neither Agree nor Disagree ○ Disagree ○ Strongly Disagree ○ Not Applicable

18. There are a number of reasons that young people give for wanting to drink alcohol

a. They want to have fun

○ Strongly Agree ○ Agree ○ Neither Agree nor Disagree ○ Disagree ○ Strongly Disagree ○ Not Applicable

b. They are sad and depressed

○ Strongly Agree ○ Agree ○ Neither Agree nor Disagree ○ Disagree ○ Strongly Disagree ○ Not Applicable

c. They want to feel better about themselves

○ Strongly Agree ○ Agree ○ Neither Agree nor Disagree ○ Disagree ○ Strongly Disagree ○ Not Applicable

d. They wish to rebel and defy their parents, teachers or other adults in authority

○ Strongly Agree ○ Agree ○ Neither Agree nor Disagree ○ Disagree ○ Strongly Disagree ○ Not Applicable

e. They wish to fit in and be accepted by their friends and peers

○ Strongly Agree ○ Agree ○ Neither Agree nor Disagree ○ Disagree ○ Strongly Disagree ○ Not Applicable

f. They wish to find solutions for their problems with family, friends and others

○ Strongly Agree ○ Agree ○ Neither Agree nor Disagree ○ Disagree ○ Strongly Disagree ○ Not Applicable

Thank you! Please place the completed questionnaire in the envelope supplied and leave it for collection.

Appendix O Survey of Adolescents –Codebook

School of Health Sciences
University of Canterbury
PB 4800
CHRISTCHURCH 8020

School of Health Sciences

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Codebook

Question 1. "Gender"
Variable name: Gender
Type: Categorical
Name of the options and values:
Male, 1
Female 2
Description: Gender sex of the respondent

Question 2. "Your age- write in the box"
Variable name: Age
Type: Numeric
Description: Age in completed years

Question 3. "How many brothers and sisters…"

Variable name: Siblings
Type: Ordinal
Values:

None, 0
One, 1
Two, 2
Three, 3
Four, 4
More than four, 5
Description: Total number of siblings for each respondent

Questions 4. " Your birth position …"
Variable name: Birthpos
Type: Ordinal
Values:

One, 1
Two, 2
Three, 3
Four, 4
More than four, 5
Description: Birth order of the respondent in the family

Question 5. " Father's education level"
Variable name: Faeduc
Type: Ordinal
Values:

Not complete school, 0
Ordinary Level, 1
Advanced Level,2
Diploma or certificate, 3
Vocational and training, 4
Degree, 5
Don't know9,
Other, 6
Description: Educational achievement of the father of the respondent as reported by the respondent

Question 6. " Mother's education level"
Variable name: Moeduc
Type: Ordinal
Values:
Did not complete school, 0
Ordinary Level, 1
Advanced Level,2
Diploma or certificate, 3
Vocational and training, 4
Degree, 5
Don't know9,
Other, 6
Description: Educational achievement of the father of the respondent as reported by the respondent

Question 7. "My mother knows.."
Variable name: Mom_know
Type: Ordinal
Values:

Strongly Agree, 1
Agree, 2
Neither Agree nor Disagree, 3
Disagree, 4
Strongly disagree, 5
Not applicable, 9

Description: An opinion variable coded in likert scale where the respondent said what he or she thought about his or her mother knew the identity of his or her friends.

Question 8. "My father knows....."
Variable name: Dad-know
Type: Ordinal
Values:

Strongly Agree, 1
Agree, 2
Neither Agree nor Disagree, 3
Disagree, 4
Strongly disagree, 5
Not applicable, 9

Description: An opinion variable coded in likert scale where the respondent said what he or she thought about his or her father knew the identity of his or her friends.

Question 9. "My mother knows how I spend..."
Variable name: Mo_ Spend
Type: Ordinal
Values:

Strongly Agree, 1
Agree, 2
Neither Agree nor Disagree, 3
Disagree, 4
Strongly disagree, 5
Not applicable, 9

Description: An opinion variable coded in likert scale where the respondent said what he or she thought about his or her mother knew how he or she spend her or his pocket money.

Question 10. "My father knows how I spend....."
Variable name: D_spend
Type: Ordinal
Values:

Strongly Agree, 1
Agree, 2
Neither Agree nor Disagree, 3
Disagree, 4
Strongly disagree, 5
Not applicable, 9

Description: An opinion variable coded in likert scale where the respondent said what he or she thought about his or her father knew how he or she spend her or his pocket money.

Question 11. "My mother decides which friends...."
Variable name: M_decide
Type: Ordinal
Values:

Strongly Agree, 1
Agree, 2
Neither Agree nor Disagree, 3
Disagree, 4
Strongly disagree, 5
Not applicable, 9

Description: An opinion variable coded in likert scale where the respondent said what he or she thought about his or her mother deciding with which friends he or she spend time.

Question 12. "My father decides which friends..."
Variable name: F_decide
Type: Ordinal
Values:

Strongly Agree, 1
Agree, 2
Neither Agree nor Disagree, 3
Disagree, 4
Strongly disagree, 5
Not applicable, 9

Description: An opinion variable coded in likert scale where the respondent said what he or she thought about his or her father deciding with which friends he or she spend time.

Question 13. "My mother decides how I spend...."

Variable name: M_money
Type: Ordinal
Values:

Strongly Agree, 1
Agree, 2
Neither Agree nor Disagree, 3
Disagree, 4
Strongly disagree, 5
Not applicable, 9

Description: An opinion variable coded in likert scale where the respondent said what he or she thought about his or her mother deciding how he or she spend his or her pocket money.

Question 14. "My father decides how I spend....."

Variable name: F_money
Type: Ordinal
Values:
Strongly Agree, 1
Agree, 2
Neither Agree nor Disagree, 3
Disagree, 4
Strongly disagree, 5
Not applicable, 9

Description: An opinion variable coded in likert scale where the respondent said what he or she thought about his or her father deciding how he or she spend his or her pocket money.

Question 15. "My mother and I discuss....."

Variable name: Mdiscuss
Type: Ordinal
Values:

Strongly Agree, 1
Agree, 2
Neither Agree nor Disagree, 3
Disagree, 4
Strongly disagree, 5
Not applicable, 9

Description: An opinion variable coded in likert scale where the respondent reported that her/his mother and he/she discussing media portrayal of alcohol freely.

Question 16. My father and I discuss.....”
Variable name: Fdiscuss
Type: Ordinal
Values:

Strongly Agree, 1
Agree, 2
Neither Agree nor Disagree, 3
Disagree, 4
Strongly disagree, 5
Not applicable, 9

Description: An opinion variable coded in likert scale where the respondent reported that her/his father and he/she discussing media portrayal of alcohol freely.

Question 17. “My mother and I are interested in....”
Variable name: M_inter
Type: Ordinal
Values:

Strongly Agree, 1
Agree, 2
Neither Agree nor Disagree, 3
Disagree, 4
Strongly disagree, 5
Not applicable, 9

Description: An opinion variable coded in likert scale where the respondent reported that her/his mother and he/she interested in each others’ opinion about alcohol use.

Question 18. “My father and I are interested in....”
Variable name: F_inter
Type: Ordinal
Values:

Strongly Agree, 1
Agree, 2
Neither Agree nor Disagree, 3
Disagree, 4
Strongly disagree, 5
Not applicable, 9

Description: An opinion variable coded in likert scale where the respondent reported that her/his father and he/she interested in each others' opinion about alcohol use.

Question 19. "My mother drinks alcohol"
Variable name: Mdrinks
Type: Ordinal
Values:

Strongly Agree, 1
Agree, 2
Neither Agree nor Disagree, 3
Disagree, 4
Strongly disagree, 5
Not applicable, 9

Description: An opinion variable coded in likert scale where the respondent reported that if his/her mother drinks alcohol.

Question 20. "My father drinks alcohol"
Variable name: Fdrinks
Type: Ordinal
Values:

Strongly Agree, 1
Agree, 2
Neither Agree nor Disagree, 3
Disagree, 4
Strongly disagree, 5
Not applicable, 9

Description: An opinion variable coded in likert scale where the respondent reported that if his/her father drinks alcohol.

Question 21. "My mother is against....."
Variable name: Magainst
Type: Ordinal
Values:

Strongly Agree, 1

Agree, 2
Neither Agree nor Disagree, 3
Disagree, 4
Strongly disagree, 5
Not applicable, 9

Description: An opinion variable coded in likert scale where the respondent reported if mother against adolescent alcohol consumption.

Question 22. My father is against....."

Variable name: Fagainst
Type: Ordinal
Values:

Strongly Agree, 1
Agree, 2
Neither Agree nor Disagree, 3
Disagree, 4
Strongly disagree, 5
Not applicable, 9

Description: An opinion variable coded in likert scale where the respondent reported if father against adolescent alcohol consumption.

Question 23. "My friends invite me...."

Variable name: Finvite
Type: Ordinal
Values:

Strongly Agree, 1
Agree, 2
Neither Agree nor Disagree, 3
Disagree, 4
Strongly disagree, 5
Not applicable, 9

Description: An opinion variable coded in likert scale where the respondent reported whether his/her friends invite to drink

Question 24. "My friends object….."

Variable name: Fobject

Type: Ordinal
Values:

Strongly Agree, 1
Agree, 2
Neither Agree nor Disagree, 3
Disagree, 4
Strongly disagree, 5
Not applicable, 9

Description: An opinion variable coded in likert scale where the respondent reported whether friends object to drink

Question 25. "I think it is OK to drink....."
Variable name: OK21drnk
Type: Ordinal
Values:

Strongly Agree, 1
Agree, 2
Neither Agree nor Disagree, 3
Disagree, 4
Strongly disagree, 5
Not applicable, 9

Description: An opinion variable coded in likert scale where the respondent reported her/his ideas about young people, under 21 years drinking.

Question 26. "I have drunk alcohol..."
Variable name: Idrunk
Type: Ordinal
Values:

Strongly Agree, 1
Agree, 2
Neither Agree nor Disagree, 3
Disagree, 4
Strongly disagree, 5
Not applicable, 9

Description: An opinion variable coded in likert scale where the respondent reported whether he/she has drunk alcohol.

Question 27. "I have seen….."
Variable name: Iseen
Type: Ordinal
Values:

Strongly Agree, 1
Agree, 2
Neither Agree nor Disagree, 3
Disagree, 4
Strongly disagree, 5
Not applicable, 9

Description: An opinion variable coded in likert scale where the respondent reported whether he/she has seen under 21 years of age people drinking.

Question 28. "I have heard my age....."
Variable name: Iheard
Type: Ordinal
Values:

Strongly Agree, 1
Agree, 2
Neither Agree nor Disagree, 3
Disagree, 4
Strongly disagree, 5
Not applicable, 9

Description: An opinion variable coded in likert scale where the respondent reported whether his/her has heard about his/her age people drink alcohol.

Question 29. "My parents/caregivers have talked....."

Variable name: PCtalked
Type: Ordinal
Values:

Strongly Agree, 1
Agree, 2
Neither Agree nor Disagree, 3
Disagree, 4
Strongly disagree, 5
Not applicable, 9

Description: An opinion variable coded in likert scale where the respondent reported whether his/her parents/caregiver have talked with her/him about underage drinking in society.

Question 30. "My parents/caregivers permit……."
Variable name: Pcpermit
Type: Ordinal
Values:

Strongly Agree, 1
Agree, 2
Neither Agree nor Disagree, 3
Disagree, 4
Strongly disagree, 5
Not applicable, 9

Description: An opinion variable coded in likert scale where the respondent reported whether his/her parents/caregivers permit her/his drinking alcohol at home.

Question 31. "People my age can easily buy from legal……"
Variable name:B_legal
Type: Ordinal
Values:

Strongly Agree, 1
Agree, 2
Neither Agree nor Disagree, 3
Disagree, 4
Strongly disagree, 5
Not applicable, 9

Description: An opinion variable coded in likert scale where the respondent reported whether his/her age people buying alcohol easily from legal sources.

Question 32. "People my age can find illegal……."
Variable name: B_Illgal
Type: Ordinal
Values:

Strongly Agree, 1
Agree, 2

Neither Agree nor Disagree, 3
Disagree, 4
Strongly disagree, 5
Not applicable, 9

Description: An opinion variable coded in likert scale where the respondent reported whether his/her age people can find illegal places to buy alcohol.

Question 33. "Negative incidents from friends……."
Variable name: Nega_fn
Type: Ordinal
Values:

Strongly Agree, 1
Agree, 2
Neither Agree nor Disagree, 3
Disagree, 4
Strongly disagree, 5
Not applicable, 9

Description: An opinion variable coded in likert scale where the respondent reported whether his/her has experienced negative incidents from alcohol use among friends and neighbours.

Question 34. "Negative incidents from family members……"
Variable name: Nega_fm
Type: Ordinal
Values:

Strongly Agree, 1
Agree, 2
Neither Agree nor Disagree, 3
Disagree, 4
Strongly disagree, 5
Not applicable, 9

Description: An opinion variable coded in likert scale where the respondent reported whether his/her has experienced negative incidents from alcohol use among family members.

Question 35. "I have seen a female drinking....."

Variable name: Fedrink
Type: Ordinal
Values:

Strongly Agree, 1
Agree, 2
Neither Agree nor Disagree, 3
Disagree, 4
Strongly disagree, 5
Not applicable, 9

Description: An opinion variable coded in likert scale where the respondent reported whether his/her has seen female drinking.

Question 36. "People under the age of 21 can obtain……."

Variable name: Home21
Type: Ordinal
Values:

Strongly Agree, 1
Agree, 2
Neither Agree nor Disagree, 3
Disagree, 4
Strongly disagree, 5
Not applicable, 9

Description: An opinion variable coded in likert scale where the respondent reported whether people under the age of 21 can obtain alcohol from their parents' home.

Question 37. "People under the age of 21 can obtain……."

Variable name: Legal21
Type: Ordinal
Values:

Strongly Agree, 1
Agree, 2
Neither Agree nor Disagree, 3
Disagree, 4
Strongly disagree, 5

Not applicable, 9

Description: An opinion variable coded in likert scale where the respondent reported whether people under the age of 21 can obtain alcohol from legal places.

Question 38. "People under the age of 21 can obtain……."

Variable name: Friend21
Type: Ordinal
Values:

Strongly Agree, 1
Agree, 2
Neither Agree nor Disagree, 3
Disagree, 4
Strongly disagree, 5
Not applicable, 9

Description: An opinion variable coded in likert scale where the respondent reported whether people under the age of 21 can obtain alcohol from friends.

Question 39. "People under the age of 21 can obtain……."

Variable name: Nbour21
Type: Ordinal
Values:

Strongly Agree, 1
Agree, 2
Neither Agree nor Disagree, 3
Disagree, 4
Strongly disagree, 5
Not applicable, 9

Description: An opinion variable coded in likert scale where the respondent reported whether people under the age of 21 can obtain alcohol from neighbours.

Question 40. "People under the age of 21 can obtain……."

Variable name: Illeg_21
Type: Ordinal
Values:

Strongly Agree, 1
Agree, 2

Neither Agree nor Disagree, 3
Disagree, 4
Strongly disagree, 5
Not applicable, 9

Description: An opinion variable coded in likert scale where the respondent reported whether people under the age of 21 can obtain alcohol from illegal places.

Question 41. I think, fighting with others…….”

Variable name: B_fight
Type: Ordinal
Values:

Strongly Agree, 1
Agree, 2
Neither Agree nor Disagree, 3
Disagree, 4
Strongly disagree, 5
Not applicable, 9

Description: An opinion variable coded in likert scale where the respondent reported about fighting with others as one of the associated behaviours with alcohol consumption.

Question 42. “I think, disturbing neighbours.....”

Variable name: B_distrb
Type: Ordinal
Values:

Strongly Agree, 1
Agree, 2
Neither Agree nor Disagree, 3
Disagree, 4
Strongly disagree, 5
Not applicable, 9

Description: An opinion variable coded in likert scale where the respondent reported about disturbing neighbours and making noise as one of the associated behaviours with alcohol consumption.

Question 43. “I think, Walking unsteadily.....”

Variable name: Bunstead
Type: Ordinal
Values:

Strongly Agree, 1
Agree, 2
Neither Agree nor Disagree, 3
Disagree, 4
Strongly disagree, 5
Not applicable, 9

Description: An opinion variable coded in likert scale where the respondent reported about walking unsteadily as one of the associated behaviours with alcohol consumption.

Question 44. "I think, ruining their family life....."

Variable name:B_ruin
Type: Ordinal
Values:

Strongly Agree, 1
Agree, 2
Neither Agree nor Disagree, 3
Disagree, 4
Strongly disagree, 5
Not applicable, 9

Description: An opinion variable coded in likert scale where the respondent reported about ruining their family members' life as one of the associated behaviours with alcohol consumption.

Question 45. "I think, living happily with family....."

Variable name:B_happy
Type: Ordinal
Values:

Strongly Agree, 1
Agree, 2
Neither Agree nor Disagree, 3
Disagree, 4
Strongly disagree, 5
Not applicable, 9

Description: An opinion variable coded in likert scale where the respondent reported about living happily with the family and neighbours as one of the associated behaviours with alcohol consumption.

The following circumstances are said to be important in contributing to the problem of young people drinking.

Question 46. " I think, weak government regulations contributing....."

Variable name: Gov_reg_
Type: Ordinal
Values:

Strongly Agree, 1
Agree, 2
Neither Agree nor Disagree, 3
Disagree, 4
Strongly disagree, 5
Not applicable, 9

Description: An opinion variable coded in likert scale where the respondent reported about weak government regulations as one of the circumstances are said to be important in contributing to the problem of young people drinking.

Question 47. " I think, advertising of alcohol contributing....."

Variable name: Advts
Type: Ordinal
Values:

Strongly Agree, 1
Agree, 2
Neither Agree nor Disagree, 3
Disagree, 4
Strongly disagree, 5
Not applicable, 9

Description: An opinion variable coded in likert scale where the respondent reported about advertising alcohol as one of the circumstances are said to be important in contributing to the problem of young people drinking.

Question 48. "I think, permissive attitudes of society contributing....."

Variable name: Attitude
Type: Ordinal
Values:

Strongly Agree, 1
Agree, 2
Neither Agree nor Disagree, 3
Disagree, 4
Strongly disagree, 5

Not applicable, 9

Description: An opinion variable coded in likert scale where the respondent reported about permissive attitudes as one of the circumstances are said to be important in contributing to the problem of young people drinking.

Question 49. "I think, poor law enforcement agencies contributing....."

Variable name: L_agency
Type: Ordinal
Values:

Strongly Agree, 1
Agree, 2
Neither Agree nor Disagree, 3
Disagree, 4
Strongly disagree, 5
Not applicable, 9

Description: An opinion variable coded in likert scale where the respondent reported about poor law enforcement agencies as one of the circumstances are said to be important in contributing to the problem of young people drinking.

To what extent do you agree that the following people are important influences on the decision of young people to drink or not?

Question 50. " I think, friends are important....."

Variable name: Ifriends
Type: Ordinal
Values:

Strongly Agree, 1
Agree, 2
Neither Agree nor Disagree, 3
Disagree, 4
Strongly disagree, 5
Not applicable, 9

Description: An opinion variable coded in likert scale where the respondent reported about friends as one of the important influences on the decision of young people to drink or not.

Question 51. "I think, parents/guardian is important....."

Variable name: Iparents
Type: Ordinal
Values:

Strongly Agree, 1
Agree, 2
Neither Agree nor Disagree, 3
Disagree, 4
Strongly disagree, 5
Not applicable, 9

Description: An opinion variable coded in likert scale where the respondent reported about parents/guardian as one of the important influences on the decision of young people to drink or not.

Question 52. "I think, other family members ....."

Variable name: Ofamily
Type: Ordinal
Values:

Strongly Agree, 1
Agree, 2
Neither Agree nor Disagree, 3
Disagree, 4
Strongly disagree, 5
Not applicable, 9

Description: An opinion variable coded in likert scale where the respondent reported about other family members as one of the important influences on the decision of young people to drink or not.

Question 53 . "I think, neighbours are important influences....."

Variable name: Inbours
Type: Ordinal
Values:

Strongly Agree, 1
Agree, 2
Neither Agree nor Disagree, 3

Disagree, 4
Strongly disagree, 5
Not applicable, 9

Description: An opinion variable coded in likert scale where the respondent reported about neighbours as one of the important influences on the decision of young people to drink or not.

Question 54. "Young people drink to have fun"

Variable name: Havefun
Type: Ordinal
Values:

Strongly Agree, 1
Agree, 2
Neither Agree nor Disagree, 3
Disagree, 4
Strongly disagree, 5
Not applicable, 9

Description: An opinion variable coded in likert scale where the respondent reported about having fun as one of the reasons that young people give for wanting to drink alcohol.

Question 55. "Young people drink because of sad....."

Variable name: Saddepr
Type: Ordinal
Values:

Strongly Agree, 1
Agree, 2
Neither Agree nor Disagree, 3
Disagree, 4
Strongly disagree, 5
Not applicable, 9

Description: An opinion variable coded in likert scale where the respondent reported about sad and depressed as one of the reasons that young people give for wanting to drink alcohol.

Question 56. "Young people drink to feel better....."

Variable name: Fbetter
Type: Ordinal
Values:

Strongly Agree, 1

Agree, 2
Neither Agree nor Disagree, 3
Disagree, 4
Strongly disagree, 5
Not applicable, 9

Description: An opinion variable coded in likert scale where the respondent reported feel about themselves as one the reasons that young people give for wanting to drink alcohol.

Question 57. "Young people drink rebel and defy....."

Variable name: Rebel
Type: Ordinal
Values:

Strongly Agree, 1
Agree, 2
Neither Agree nor Disagree, 3
Disagree, 4
Strongly disagree, 5
Not applicable, 9

Description: An opinion variable coded in likert scale where the respondent reported about wishing rebel and defy their parents, teachers or other adults in authority as one the reasons that young people give for wanting to drink alcohol.

Question 58. "Young people drink to fit in....."

Variable name: Fitin
Type: Ordinal
Values:

Strongly Agree, 1
Agree, 2
Neither Agree nor Disagree, 3
Disagree, 4
Strongly disagree, 5
Not applicable, 9

Description: An opinion variable coded in likert scale where the respondent reported about wishing to fit in and be accepted by their friends and peers as one of the reasons that young people give for wanting to drink alcohol.

Question 59. "Young people drink to find solutions....."

Variable name: Solution
Type: Ordinal
Values:

Strongly Agree, 1
Agree, 2
Neither Agree nor Disagree, 3
Disagree, 4
Strongly disagree, 5
Not applicable, 9

Description: An opinion variable coded in likert scale where the respondent reported about wishing to find solutions for their problems with family, friends and others as one the reasons that young people give for wanting to drink alcohol.

Appendix P Results of Principal Component Analysis

```
Importance of components:
                          Comp.1    Comp.2    Comp.3    Comp.4     Comp.5    Comp.6     Comp.7     Comp.8     Comp.9
Standard deviation     3.1329674 2.7412180 1.9299081 1.8549884 1.57089765 0.9891024 0.80564406 0.73691201 0.65318212
Proportion of Variance 0.3221685 0.2466372 0.1222488 0.1129415 0.08099666 0.0321110 0.02130383 0.01782389 0.01400361
Cumulative Proportion  0.3221685 0.5688057 0.6910545 0.8039960 0.88499268 0.9171037 0.93840752 0.95623141 0.97023502
                         Comp.10     Comp.11     Comp.12
Standard deviation     0.58329822 0.545388737 0.518808030
Proportion of Variance 0.01116741 0.009763009 0.008834556
Cumulative Proportion  0.98140244 0.991165444 1.000000000
> |
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